

Read Complete Report of Metal Branch Meeting—This Issue

American Artisan

and Hardware Record

Sheet Metal Work—Welding—Heating

Vol. 94, No. 17

CHICAGO, OCTOBER 22, 1927

\$2.00 Per Year

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Where permanence is required at reasonable cost —

Horse Head Zinc

J. D. PHILSON
INCORPORATED
ROOFINGS

100-200 EAST THIRD ST.
MILVERNON, N. Y.

Aug. 4, 1927.

New Jersey Zinc Sales Co.
160 Front Street
New York City

Gentlemen:

Our experience with Horse Head Zinc has proven very satisfactory.

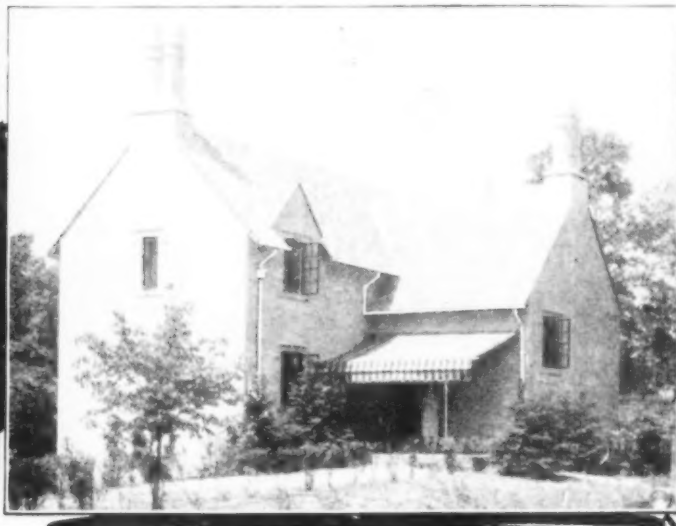
Horse Head Zinc was used exclusively on the Lehigh Portland Cement Company's Bronxville model house. This was a very satisfactory job and attracted a great deal of favorable comment.

We can highly recommend Horse Head Zinc for all exterior sheet metal work.

Yours very truly,

J. D. PHILSON, INC.

JDP/MS



Lehigh Portland Cement Company's Model Home at Bronxville, N. Y. All sheet metal work made from Horse Head Zinc. Installed by J. D. Philson, Inc., Mt. Vernon, N. Y.

THE specification for sheet metal work on the Lehigh Portland Cement Company's Bronxville Model Home called for a permanent, rust-proof material of nominal cost. A material was to be selected to give years of uninterrupted service without repair and without replacement. No wonder, then, that *Horse Head Zinc* was specified.

Horse Head Zinc is pure, high grade zinc. It forms easily and will not crack. Every sheet that leaves our rolling mill has before it a lifetime of repair-free service.

Your customers will be completely satisfied when you use *Horse Head Zinc*. And your installations will serve as salesmen for other work throughout your lifetime.

Clip the coupon for a sample.



All standard shapes and sizes of *Horse Head Zinc* conductors, gutters and fittings are made and distributed by the following fabricators.

DAVID LUPTON'S SONS CO. Philadelphia, Pa.
THE J. M. & L. A. OSBORN CO. Cleveland, Ohio
KLAUER MANUFACTURING CO. Buffalo, New York
HOLBROOK, MERRILL & STETSON Dubuque, Ia.
SHEET METAL MANUFACTURING CO., Inc. San Francisco
Oakland and Los Angeles, Cal.
Brooklyn, N.Y.

The New Jersey Zinc Company
160 FRONT STREET - NEW YORK CITY

THE NEW JERSEY ZINC COMPANY

160 Front Street - New York City

Please send me a sample of *Horse Head Zinc* so that I can test its easy working qualities.

NAME _____

ADDRESS _____

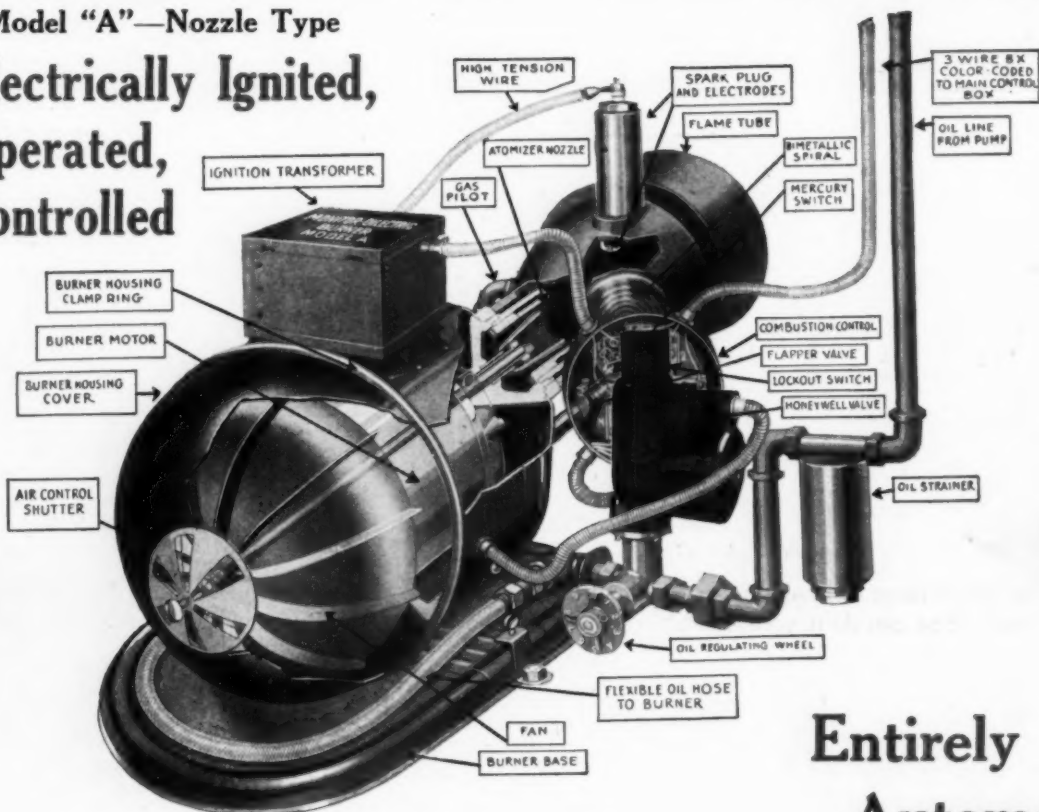
11 AA

MONITOR

OILECTRIC BURNERS

Model "A"—Nozzle Type

Electrically Ignited,
Operated,
Controlled



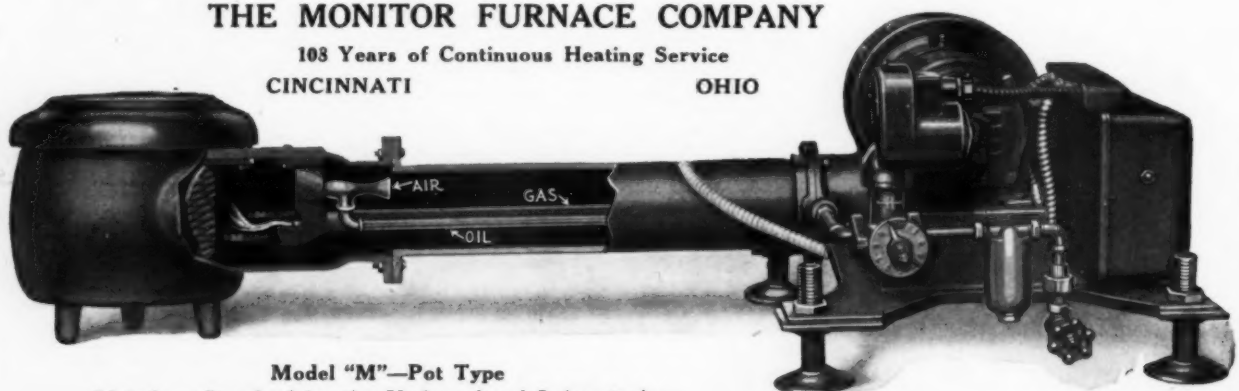
Entirely
Automatic
Dependable

Now—you can be the local leader in this rapidly growing business. Monitor Oilectric Burners—Model "A" and Model "M" enable you to take care of every domestic oil burner requirement.

Choice, exclusive territories are being allotted. Write—at once—for interesting proposition and Oilectric Catalog.

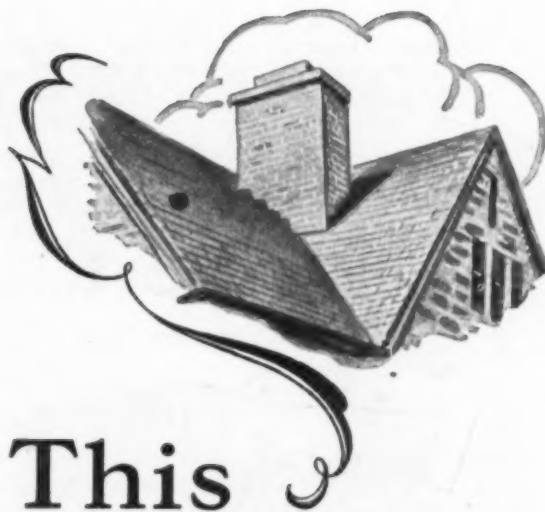
THE MONITOR FURNACE COMPANY

108 Years of Continuous Heating Service
CINCINNATI OHIO



Model "M"—Pot Type

Listed as Standard by the Underwriters' Laboratories



This to This

and here's the reason: The Carburetor, placed between the combustion dome and the radiator mixes heated air with the unburned gases and *burns the smoke*.

CAN you conceive of thick, black clouds of smoke quickly changing to a thin, gray haze and then vanishing?

You don't have to imagine it. You can *see* it done. You can do it yourself!

Fire a SUPERIOR SUPER-SMOKELESS Warm Air Furnace with the cheaper grades of soft coal until the black smoke belches forth from the chimney. Then open the Carburetor door. In an inconceivably short time the chimney clears and you can *see* the smoke being burned by the *secondary combustion*—apparently the impossible!

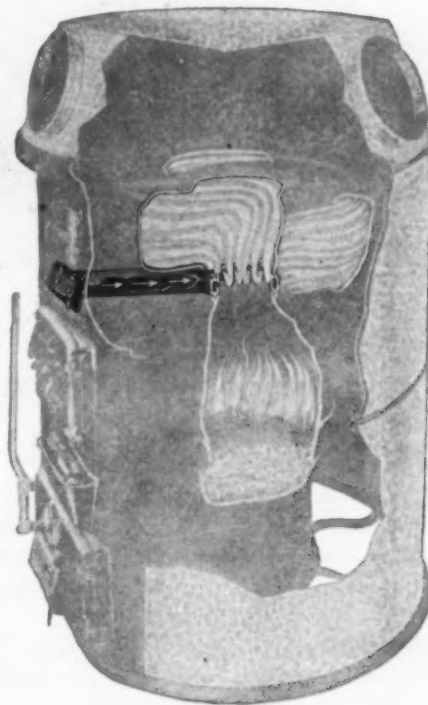
If you can sell furnaces, you can sell *more* of these, with ample profit on every sale.

The SUPERIOR SUPER-SMOKELESS Furnace lends itself so well to an actual, *visual* demonstration of its remarkable gas-and-carbon-burning principle with either soft or hard coal that many sales result. Write for full particulars—how you can make money from our Sales Demonstration Plan.

UTICA HEATER COMPANY, Utica, N.Y.
Division of National Radiator Corporation.

365 East Illinois St., Chicago, Ill.

Makers of Superior Pipe and New Idea Pipeless Furnaces.



SUPERIOR SUPER-SMOKELESS WARM AIR FURNACE

SUPERIOR DEALERS ARE EXCEPTIONALLY LOYAL—WHY?

Published Weekly by American Artisan and Hardware Record, Inc., 620 South Michigan Avenue, Chicago, Illinois.
Entered as Second Class Matter June 25, 1887, at the Post Office at Chicago, Illinois, under act of March 3, 1879.

ROBINSON STEEL FURNACE

Made of
TONCAN COPPER
MO-LYB-DENUM IRON
Fortified against
RUST AND CORROSION



Designed According to the correct Rating Formula---

THAT means that it is an up-to-date furnace—not only built sturdily of the highest quality material but designed to render the highest heating efficiency.

Notice that there is plenty of room for cold air return and easy flow of air over radiating surfaces.

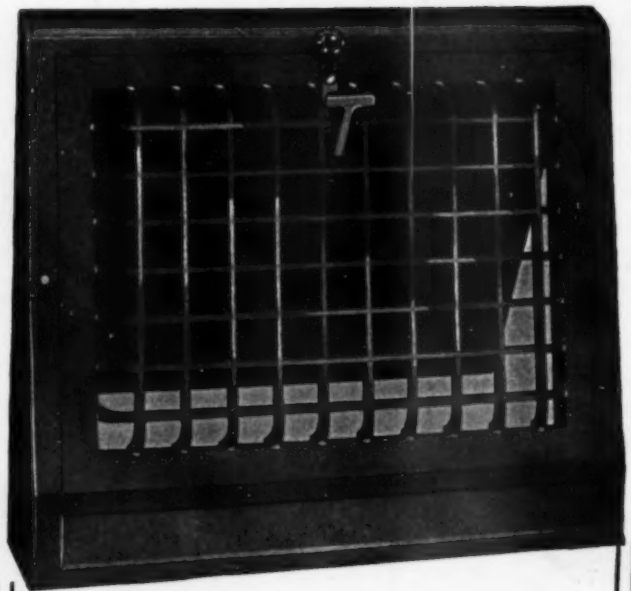
The ROBINSON is Electric Welded Throughout to insure absolute leak proof construction. It is furnished with one or two outlets as desired.

Notice that the radiator is supported independently—no weight on furnace drum.

New Dumping Device—One Piece Circular Grate—large water pan—lever shaker handle, and Shipped with front assembled are other features that you will appreciate.

The agency for the Robinson Steel Furnace means steady profits on a reliable furnace—write today for full details.

The A. H. ROBINSON COMPANY
MASSILLON, OHIO



Have you seen it? WALWORTH New Standardized STYLE B Baseboard Register

NOT only made throughout in accordance with the rules of the Standardization Committee but it is the *neatest* durable register ever made to sell at a popular price.

Simple, easy and accurate in operation, cast face made of the best iron, finished in all the popular finishes and made in the following sizes:

8x10	inch	2 1/4	base	extension
8x12	"	2 1/4	"	"
9x12	"	2 1/4	"	"
10x12	"	3 1/4	"	"

Study the features of this new register.

Write today for full particulars and prices on the Walworth New Standardized Style B Baseboard Register.

Order some for that next job—your customers will want them.

Made by the makers of Walworth Double Gratings, Semi-Steel Registers, Side Wall and Floor Registers, Ventilators, Borders and Casings Rings.

THE WALWORTH RUN FOUNDRY COMPANY

West 27th Street and N. Y. C. & St. L. R. R., Cleveland, Ohio

Distributors:

ROBINSON FURNACE CO., Chicago, Ill.

HART MFG. CO., Louisville, Ky.

PHILLIPS & BUTTORFF MFG. CO., Nashville, Tenn.

Eastern Representatives:

FENN TINSMITH'S SUPPLY CO., Philadelphia, Pa.



Can't Beat This Combination!

Trying to beat a man at his own game is like trying to make water run uphill---it can't be done.

In the furnace game the dealer who thoroughly understands his business and sells his customers heating satisfaction instead of only a price is also unbeatable.

"AFCO" Boiler Plate Furnaces, installed according to the standard code, have set the standard for heating satisfaction.

One dealer in each community can obtain the "AFCO" franchise and become the leading dealer---both in sales and profits.

We have the plan and the furnace---it's up to you. Full details will be sent without obligation. **American Furnace Co., St. Louis, Mo.**



Other Furnaces Come and Go, but "AFCO" Stays and Grows

The Economical NIAGARA FURNACE IS ELECTED



to serve more and more homes year after year.

Its national popularity is due to its universally satisfactory service.

Ease and economy of operation—

Quick heating ability on cold mornings—

Simplicity in keeping a clean fire—

Freedom from repair.

Why not find out why so many dealers are voting for the Niagara as the furnace they wish to handle?

Also Manufacturers of
Monarch Furnaces

THE FOREST CITY FOUNDRY & MFG. CO.
1220 Main Avenue
Cleveland, Ohio

Times Have Changed!

PEOPLE no longer buy "fads" when they buy furnaces.

They want known dependability above all else, at a price that is neither extravagant nor risky. That just about describes the Keith—the furnace YOU should be selling.

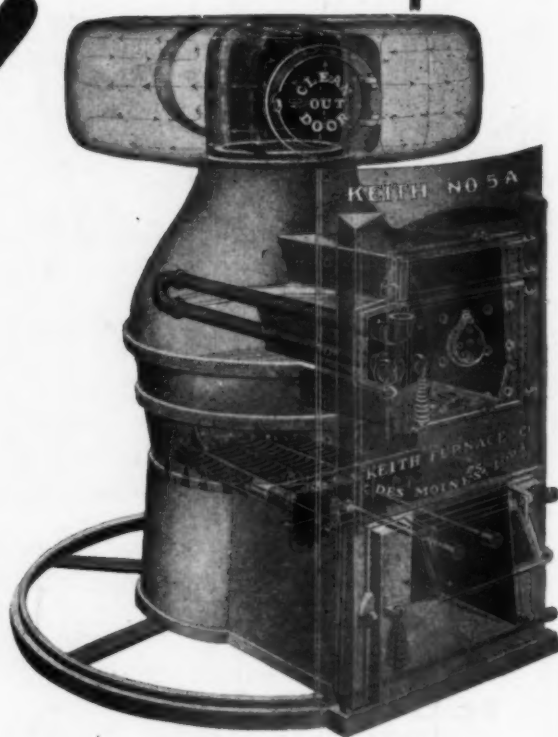
KEITH

Furnace Company

DES MOINES, IOWA

Our new catalog just off the press. It is worth seeing. Send for your FREE copy today.

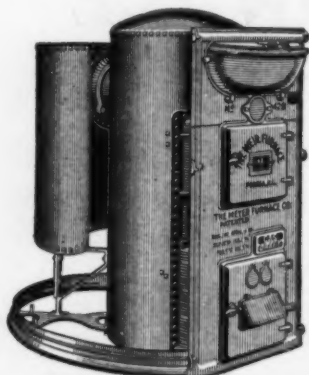
"Always Save Money in the End"



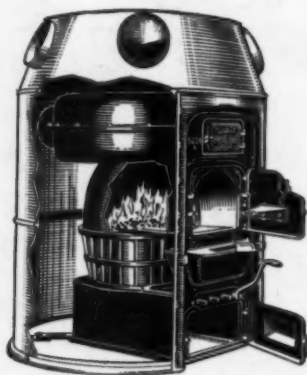
IT'S HERE!

We speak of the Fall Rush when Real Service is absolutely necessary if you are to retain the good will of your customers.

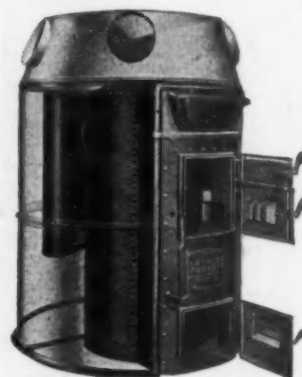
From no other source, do we believe, can you obtain such Complete Selection and Satisfactory Service on either Furnaces or Supplies, as from the "Standard Folks."



Weir Steel Furnace



Nesbit Moist Heat Furnace



Stanco Steel Furnace

We have everything needed by the Furnace-man. Ask for General Catalog No. 15 and Furnace Catalogues and Prices.

STANDARD FURNACE & SUPPLY COMPANY

OMAHA, NEBRASKA

When writing mention AMERICAN ARTISAN—Thank you!



Agricola

Made by

*"The fastest
growing
Furnace Plant
in
America"*

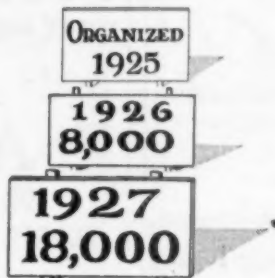


There is a reason

In a better furnace you expect to find new ideas---that's why

Agricola Features are better

AND what's more our foundry being new and up-to-date in every particular as well as one of the largest in the country, these features and the entire Agricola quality construction are produced at minimum cost.



WRITE today for our special illustrated circular which gives full mechanical details.

The Agricola agency is highly desirable now—in 1928 it will be a prize—ask about it at once. 1928 will be an Agricola year.

Agricola Furnace Company

GADSDEN, ALABAMA

Say you saw it in AMERICAN ARTISAN—Thank you!

'In the Heart of Cleveland'

AUDITORIUM HOTEL



EAST 6TH AND ST. CLAIR AVE.

TO THE PUBLIC:

Are you wondering why we have built "Another" Hotel in Cleveland. One must have a good reason for spending nearly two million dollars. We have a reason worth far more than that.

Every hotel operator gives "His best efforts for your comfort." We have centered our efforts around one ideal desire, "To make you happy."

There must be something back of that desire. You can easily prove it by coming here just once.

Sincerely yours,

James L. Smith
Manager

Our Service Makes You Happy

REPAIRS
for
STOVES
FURNACES
and
BOILERS

**Send for these
illustrated
order blanks
today~**

*We have the largest and
most complete stock of ~*

STOVE, FURNACE & BOILER REPAIRS
NORTHWESTERN STOVE REPAIR CO.
CHICAGO - ILLINOIS

**WE MANUFACTURE THE
MOST COMPLETE LINE OF**


REPAIRS

for FURNACES
**STOVES, STEAM AND HOT WATER
BOILERS**

Shipments same day as order received

Write for special catalog


THE NIEHAUS FURNACE REPAIR CO.
Cleveland, Ohio Cincinnati, Ohio



BOLTS

WE MANUFACTURE A COMPLETE
LINE OF BOLT PRODUCTS, INCLUDING
STOVE BOLTS, CARRIAGE BOLTS,
MACHINE BOLTS, LAG BOLTS, NUTS,
COTTER PINS, ETC. ALSO STOVE
RODS, SMALL RIVETS AND HINGE
PINS. CATALOG ON REQUEST.

THE LAMSON & SESSIONS CO.
THE KIRK-LATTY CO.
1971 W. 85th St. Cleveland, O.



**PATTERNS FOR STOVES
AND HEATERS**
THE CLEVELAND CASTINGS PATTERN COMPANY
CLEVELAND, OHIO

PATTERNS
FOR STOVES AND HEATERS FIRST-CLASS
IN WOOD and IRON
VEDDER PATTERN WORKS ESTABLISHED
1835 **TROY, N. Y.**

IRON AND WOOD
STOVE PATTERNS
QUINCY PATTERN COMPANY
QUINCY, ILLINOIS

BOOMER

THIS is our latest addition to the Boomer line. We heartily recommend it for your favorable consideration.

The severe tests we have given this furnace have proven its durability. The unsolicited reports we received from users last winter have been most flattering.

For durability, economy, easy to operate, easy to set up and the low price at which we offer this furnace, you will make no mistake in arranging for the agency.

THE HESS-SNYDER CO.
MASSILLON, OHIO

Makers of BOOMER FURNACES for Forty-Three Years



SIDE VIEW
MEYERS DOUBLE DUTY HEATER AND COMBUSTION CHAMBER

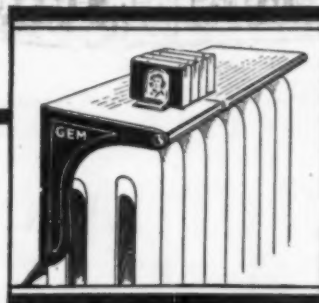
Fig. 1 shows combined fuel saving unit with burner in place. Arrows indicate volume of heated gases at top of fuel saver and small amount escaping into chimney.

FRONT VIEW OF COMBUSTION CHAMBER

Fig. 2 shows air flowing in at the bottom and up around the furnace and tubes to rooms above.

IF THEY DON'T BUY IT, THEY PAY FOR IT, ANYWAY!
We get every heat unit and put it to work . . . People can burn oil now cheaper than coal . . . We have a real money-maker for you, Mr. Dealer . . . Heat TWO apartments for the cost of ONE.

MEYERS FUEL SAVER CO., Inc. **Janesville, Wis.**



"GEM" ADJUSTABLE RADIATOR SHIELDS

Tell your customers that a "Gem" Radiator Shield on every radiator reduces fuel and redecorating costs. 8 popular sizes, gold-bronze or aluminum finish. **ADJUSTABLE** to radiator top widths, 6" to 13"; lengths 11" to 65". Retail at \$4 to \$7.

BUY FROM YOUR JOBBER



1140 BROADWAY, NEW YORK, N.Y.

"American Seal" FURNACE CEMENT

**Roof Cement — Stove Putty
Plumbers Putty**

PAINTS and SPECIALTIES

WILLIAM CONNORS PAINT MFG. CO.
TROY Established 1852 NEW YORK

JAMES L. PERKINS
Western Distributor
140 S. Dearborn St., Chicago, Ill.

The BIGGEST IMPROVEMENT *In 50 Years---*

EVER in the lead,
Lamneck now announces the biggest improvement in the design and manufacture of furnace pipe and fittings in half a century.

The W. E. Lamneck Company
416-432 Dublin Avenue, Columbus, Ohio

LAMNECK

SIMPLIFIED
PIPE AND
FITTINGS

SEE THE NOVEMBER FIFTH
ISSUE OF THIS MAGAZINE
FOR FURTHER INFORMATION

Oct. 22nd! *is the day!*

COMMENCING with an announcement in the October 22nd issue of The Saturday Evening Post, an intensive direct-mail campaign and widespread dealer newspaper advertising, we're going to "tell the world" about—

The GREATEST IMPROVEMENT Ever Made in Warm-Air Heating!



The Reed Furnace Filter! Easily installed at any time in the air intake of either gravity or forced-air systems—old or new. Gets at the very root of the evil by removing dust, dirt and soot from the heating air *before it enters the pipes*. Arranged so that all the air must pass through and be cleaned.

Everybody wants to keep dust and dirt from coming up the registers. *It can be done with the Reed Furnace Filter!* Makes the warm-air heating system cleaner than hot water or steam! Lift your business out of price-cutting competition and open up an entirely new field of profits! Make at least one Reed installation—show your customers what it does in actual use—and the rest is easy! Every warm-air furnace—old or new—an immediate prospect!

The Reed Furnace Filter

Get the business that's waiting for you in your own town. Let us tell you about a plan for local advertising *over your own name*, in your home-town paper, that will not cost you a cent! The season is on! Get the coupon off today!

The Reed Furnace Filter is built on exactly the same time-tried principle as the famous Reed Air Filter, 200,000 of which are now cleaning the ventilating air for thousands of well-known users like Prudential Life, Lord & Taylor's, Wanamaker's, Standard Oil, Ford Motor etc. *Big opportunities for the dealer who acts promptly!*

Use This

Name
Address
City State

REED AIR
FILTER CO.
Incorporated

222 Central Avenue
Louisville, Kentucky

Send at once complete information about the Reed Furnace Filter and your plan for advertising locally without cost to me.



The unseen fire* that attacks your handiwork



Ingot Iron

This triangle is your assurance that products bearing it are made with the skill, intelligence and fidelity associated with the name "ARMCO," and hence can be depended upon to possess in the highest degree the merits claimed for them.

RUST-FIRE! Here is a fire that you can help control, whether it be in industry or home. For every installation in which sheet metal is used is subject to its devastating influence. And the unfortunate thing about it all is that no insurance is available.

Perhaps the job is a simple gutter . . . Perhaps it's a big roofing or ventilating installation. But whatever it is you can better safeguard your customer's investment by using ARMCO Ingot Iron, the iron that has proved its ability to withstand Rust-Fire.

Then, too, consider the advantages of this pure iron before it even leaves your shop. It is soft, yet tough. It bends further and easier in the brake. It conserves your men's energy. Add to these, the decided economy of reduced time and labor costs, and the trifling extra cost of ARMCO Ingot Iron becomes an insignificant matter.

ARMCO DISTRIBUTORS' ASSOCIATION OF AMERICA

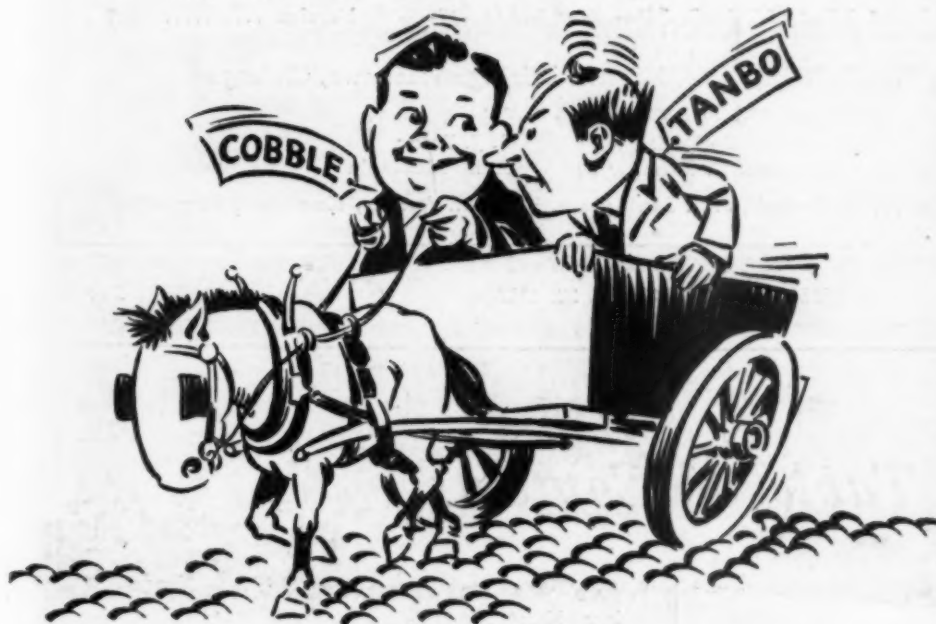
Executive Offices, Middletown, Ohio

*Rust . . . Fire . . . The only difference between rusting and burning is time—both are oxidation. You can see and feel the fire produced by rapid burning. But when metal rusts the process is too slow to be seen. Rust is the ash of this fire.

ARMCO **INGOT IRON**
The Purest Iron Made

Mention *AMERICAN ARTISAN* in your reply—Thank you!

Remember the Old "Cobble" Highways of Yesterday?



BUMP—bumpety—bump! Many years of bumping, jostling trucks and wagons over the old roads failed to wear them down. For the "cobble" surface gave them strength and the ability to stand up under the hardest usage.

T&B "Cobble" Registers and Cold Air Faces are made upon the same principle. Entire surface is covered with tiny "cobble" that assure added strength and long wear, and prevent foot-slipping—a common fault with smooth faced registers. Overheating is eliminated because of the increased radiation surface. All wear is received on "cobble" tips, thereby preserving finish which covers the recessed surface proper.

There are many other satisfaction features about this "cobble" line. Furnace men save time and labor installing them because of the special rolled edge and narrow rim. Style 80 Register and Style C "Cobble" Cold Air Faces are cast—yet they cost no more than stamped faces.

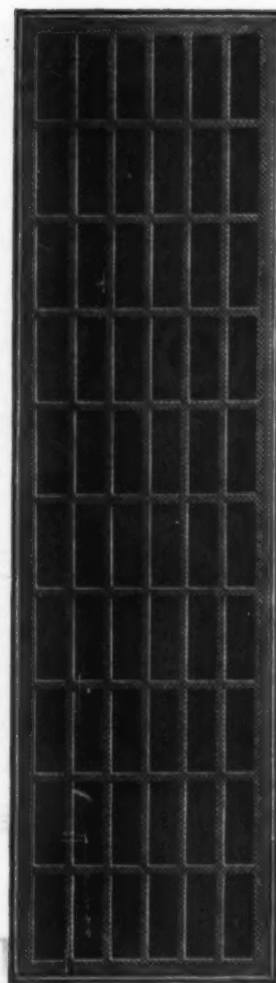
Dealers should know details of the "cobble" line. Send coupon for prices and full particulars.

TUTTLE & BAILEY MFG CO.

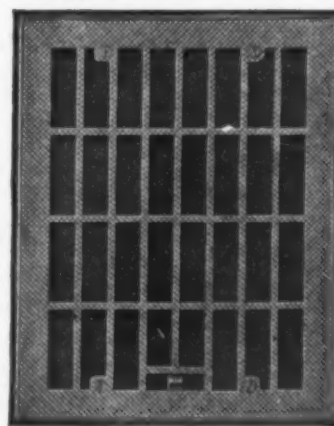
Established 1846

441 LEXINGTON AVE.

NEW YORK CITY



Style C "Cobble" Cold Air Face.
Saves time — labor — money.



Style 80 "Cobble" Floor Register—
companion piece to Style C Cold
Air Face.

TUTTLE & BAILEY MFG. CO.,
441 Lexington Avenue, N. Y. City

Gentlemen: Please send information regarding the "Cobble" Line.

Name.....

Address.....

AA 10-22-27

Founded 1880

Published to Promote
Better
Warm Air Heating
and
Sheet Metal Work

American Artisan

and Hardware Record

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Yearly Subscription
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Unsell Yourself That Business Is Bad

Elbert Hubbard used to tell the story of a naturalist who divided an aquarium with a glass partition, putting a bass in one end and minnows in the other. Every time a minnow approached the glass partition, the bass struck. But after three days of bruising his nose, he gave it up and merely took the food that was given to him. Though the naturalist removed the glass partition and the minnows swam around him, the bass paid no attention to them, because he had been sold on the idea that business was bad. Occasionally we hear of salesmen who need to try another strike. As a matter of fact, the partition has been removed for some time. There are orders on all sides for those who go after them.



IT is not necessary for you to carry a heavy stock of sheets—you can secure immediate delivery from Ryerson any time, by the bundle or by the ton.

More than twenty kinds of sheets—all standard sizes, gauges and grades are stored in heated rooms to preserve their finish. Draw on these stocks—there is a sheet for every purpose.

We also carry a complete line of all other products required by the sheet metal trade, such as bars, angles, channels, rivets, bolts and nuts, etc.

Write for the Journal and Stock List--the "key" to Immediate Steel

The following sheets are carried in stock:

Ascoloy
Black Steel
Blue Annealed
Galvanized
Patent Leveled
Silver Finish

"C" Pickled
Single Pickled
Deep Stamping
Uniform Blue
Wellsville Polished

Bill Posters
Partition Steel
Electrical
Tool Steel
Lead Coated (Ternes)

Armco Ingot Iron
Armco Galvanized
Armco Enameling
Corrugated Armco
Corrugated Steel

JOSEPH T. RYERSON & SON INC.
ESTABLISHED 1842

PLANTS: CHICAGO ST. LOUIS CLEVELAND JERSEY CITY
MILWAUKEE CINCINNATI DETROIT BUFFALO BOSTON
REPRESENTATION IN: DENVER SAN FRANCISCO NEW YORK
MINNEAPOLIS TULSA HOUSTON LOS ANGELES NEWARK

RYERSON STEEL-SERVICE

Say you saw it in AMERICAN ARTISAN—Thank you!



**Doubly Durable
Because
Doubly Protected**

- 1** The base metal is the highly rust-resistant Copper Alloy, known everywhere as Ohio Metal.
- 2** The conductor is completely formed and finally hand-dipped in pure molten zinc.

A SAMPLE of Wheeling Hand-Dipped Conductor will enable you to judge why the trade, generally, accepts it as the most satisfactory and the most economical conductor made.

Note that the metal base is completely imbedded in a thick, impenetrable protective coating of pure zinc. Note also that the seams, edges and surfaces are thoroughly and uniformly covered—the result of *hand-dipping after forming*.

Exposed to the air, the zinc first protects itself by a natural surface oxidation. This ceases abruptly after closing the pores of the zinc and a lasting barrier to the elements is the result.

Made of Ohio Metal, hand-dipped in pure molten zinc, this conductor is stronger, more rigid and doubly durable. Let us send you a sample for close-up inspection.



Wheeling

HAND DIPPED CONDUCTOR

Wheeling Corrugating Company, Wheeling, W. Va.

NEW YORK
ST. LOUIS

PHILADELPHIA
RICHMOND

CHICAGO
CHATTANOOGA

KANSAS CITY
MINNEAPOLIS



American Artisan and Hardware Record



Vol. 94

CHICAGO, OCTOBER 22, 1927

No. 17

Trends and Conditions in Metal Working Industries Reviewed at Atlantic City

Metal Branch Members of National Hardware Association Learn Possible Solutions to Industry Problems

CONDITIONS in all phases of the metal industry were outlined for manufacturers and jobbers during the meeting of the Metal Branch of the National Hardware Association of the United States, assembled in the lower lobby of the Marlborough-Blenheim Hotel, Atlantic City, New Jersey, Tuesday, October 18, 1927. The meeting was exceedingly well attended and the papers presented gave those present an excellent cross-section of trends and developments within the metal industry during the past six months.

The opening remarks were made by F. O. Schoedinger, of the F. O. Schoedinger Company, Columbus, Ohio, Chairman of the Metal Branch. What Mr. Schoedinger said is epitomized below.

Address of Chairman F. O. Schoedinger

The men who have moved the world have been men who believed something and believed it with all their heart and soul and mind and strength.

It is my very sincere belief that this organization has in the past and should continue in the future to render a distinct and valuable service to its members. Gatherings of this kind are of inestimable value to its membership; where the many problems that confront us in our daily business life can be freely discussed, and many times valuable suggestions are offered for their relief and our mutual helpfulness.

Criticism of Value Only as Guide and Restrainer

Criticism has its place and it is a high place; our beliefs must justify

themselves at the bar of reason, and our zeal must be according to knowledge; but after all, the function of criticism is secondary. It cannot and does not supply motive power—it can only serve as a guiding, restraining and correcting agency.

Profit is the basis of all successful business. The measurement of

what would be left after all overhead costs have been paid.

In reckoning our present condition we must regard, first, that too many business enterprises, large and small, are operating on narrow margins of profit or no profit. This is serious, but not beyond remedy if the way to make profits is studied with as great care as is usually devoted to making sales.

The mortality among business enterprises runs high and is perfectly understandable, in view of the fact that the complexities of doing a successful business and making reasonable profits were never more pronounced in all of our history.

The standard of living in this country was, never higher. The difference between rich and poor that aggravated observers decades ago are now barely seen.

There has been some recession in general business in the second and third quarters. Carloadings in the first half of 1927 showed a moderate increase in weekly average over the corresponding period last year, whereas steel ingot production declined slightly. Many crops have been curtailed and prices are high. How far the law of supply and demand will compensate the farmer and planter for the disheartening early season outlook remains to be demonstrated, although the outlook is on the whole much brighter than it was earlier in the season. In several of our western agricultural states prosperity of an unusual order is already manifest. There has been a falling off in automobile sales

NEWLY ELECTED NATIONAL HARDWARE OFFICERS

President: W. H. Donlevy, Carter, Donlevy & Co., Philadelphia, Pennsylvania.

First Vice-President: Brace Hayden, Dunham, Carrigan & Hayden Company, San Francisco, California.

Second Vice-President: A. H. Nichols, Buhl Sons Company, Detroit, Michigan.

Executive Committee: (3 year term) Frank A. Bare, Denver, Colorado; D. M. Fulton, Baltimore, Maryland, and Charles H. Ireland, Greensboro, North Carolina.

prosperity in business is not volume of merchandise and credit in circulation, but what is left after costs of every kind are deducted from the income that volume brings.

We have deprecated strongly the fetish of volume, and we still note a constant struggle for business without taking into consideration

this year of approximately 14 per cent.

May I enjoin upon all of our members the value of their membership as a distinct business asset in this organization? It is my sincere hope that every member will avail himself of the opportunity extended to promote anything that is for the benefit of this organization.

A free and frank discussion of all problems is certainly welcome.

Following Chairman Schoedinger on the program came Walter S. Doxsey, Editor of the *Daily Metal Trade*, Cleveland, Ohio, who presented an address on "The Present Position of Warehouses in the Steel Industry." For the complete address of Mr. Doxsey please turn to page 157 of this issue.

Walter C. Carroll, President of the National Association of Tin Plate Manufacturers, Pittsburgh, Pennsylvania, presented a very able address on the necessity of "More Effective Coöperation Between Mills and Distributors." In this address Mr. Carroll stated in a very clear and concise manner the undesirability of the mills making direct shipments on jobbers' accounts. For the entire address of Mr. Carroll please turn to page 152 of this issue.

The Chairman: "We are certainly indebted to Mr. Carroll for this splendid paper. You recognize, gentlemen, that at our meeting at Cleveland this matter was discussed very freely, and the outcome of it was that a committee was appointed. This committee had done splendid work; they traveled hundreds of miles. Several members of that committee held a session, I believe, in July, and several members of it have convened several times since, and I am going to ask Robert H. Lyon to make the report for that committee. The subject under consideration at that time was the committee known as "The Committee on Mill Direct Shipments," just exactly what Mr. Carroll has dealt with in his voluminous paper which he has given us today."

The report of the Committee on Mill Direct Shipments was made by

Robert H. Lyon, Lyon, Conklin & Company, Baltimore, Maryland, Chairman of that committee.

"Mr. Chairman and gentlemen: My report is going to be very brief. Both Mr. Doxsey and Mr. Carroll certainly have given this organization something to think about—some food for thought and some action to take. Our worthy chairman at the meeting in Cleveland stated that this was an organization to do something, that we are to work in the interest of the steel business, and we are doing something.

"Now it seems that the conditions in the steel industry are both bad from a retail standpoint and also from a jobbing or distribution standpoint. Our committee met in Buffalo and we were in earnest. We discussed this question pro and con for seven consecutive hours. One of the members, Mr. Ryan, came all the way down from Montreal, just to attend the meeting, and went right back on his vacation again. At that meeting we drew up a plan to be presented to the National Association of Sheet and Tin Plate Manufacturers, and it was the consensus of opinion of the members that I go to Chicago and talk to Mr. Carroll, which I did.

"No doubt Mr. Carroll has placed this matter before the National Association, and possibly—I don't know—but I assume that some of the remarks in his paper may have been called forth by that visit. I think it is only fair to this association to read to you the recommendations that the committee made in the meeting yesterday afternoon.

"I think I ought to read you this first, because it is a simple recommendation and will be thrown open for discussion immediately upon presentation. I do not know whether I should mention—I do not think it is necessary right now to mention what our resolutions were at the first meeting. That may come up after the discussion of this resolution, and it bears very pertinently on the question of direct shipments, that the jobbers or distributors are requesting the mills to make and that same mills are making without the request of the jobbers.

"Our resolution is: 'That no mill make shipments of less than carloads in standard sizes and gauges, black and galvanized flat and formed products.' The members of this committee, I am sorry to say, were not unanimous. Mr. McNieve was the dissenting voice."

(Discussion followed on the report of Mr. Lyon, and at the conclusion of the discussion Mr. Nickerson moved that the committee's recommendation be accepted. The motion was seconded.)

The Chairman announced the motion had been carried, as indicated by the count.

The Chairman then introduced C. F. Barker of Lamb & Ritchie Company, Cambridge, Massachusetts, who spoke as follows on the "Conditions Among the Distributors of Sheet Metals":

"You must all realize that any remarks I may make regarding conditions between distributors of sheet metals are necessarily the result of observation, since we are fabricators of sheet metals and not distributors.

"I can state from observation that conditions among New England distributors at least are, in my opinion, better than at any time in the past. When I speak of conditions I mean methods of distribution and trade practices generally. We thoroughly believe that there should be co-operation among distributors along these lines, and that manufacturers should do their utmost to encourage harmonious practices, and for this reason Lamb & Ritchie Company have recently changed their selling policy.

Company Discontinues Practice of Selling Direct

"In years past we have always sold our material to anyone who wanted to buy direct from us, no matter who he was or where he was in New England. In addition to this we expected to sell the distributor all of his requirements, and in a great many instances we were wrong in believing this could be done. In January of this year the company decided to stop this practice of selling direct to the consumer or retailer and decided to sell to the distributor only. In doing this we believed that we not only would get

more business, but it would have a tendency to create a better feeling between the distributor and ourselves. Of course, if the retailer or consumer wishes to come to our factory to get his material he can still do so, but before giving it to him he has got to tell us which of our distributors he wishes to have the material billed through, and we have a list of distributors posted in the shipping room for his convenience. It has been very gratifying to us to see the remarkable change this great step (and it was a great step for us) has made between our good distributors and ourselves. I believe I am correct when I say our business has more than doubled since January.

"Of course, you must realize that to change our policy was not the easiest thing to do, for there was a lot of work to it besides figuring whether or not we would lose the most of our business, but fortunately for us this change has been of great help and I believe other manufacturers would profit by it if they would also take the same stand.

"If there are any questions which you gentlemen care to ask me, I will be only too glad to answer them if it is within my power. Thank you."

H. N. Taylor, of the N. & G. Taylor Company, Philadelphia, Pennsylvania, presented the report of the Roofing Terne Plate Simplification Board of Review.

Mr. Taylor's report reads as follows: "The committee met this morning and reaffirms the recommendation in its present form—as it has continued in the past two years. The committee recommends a change in the designation of the committee from the Terne Plate Simplification Board of Review to the Roofing Terne Plate Committee. The committee holds itself in readiness to request the association to make a survey among the jobbers to determine whether further eliminations of weights can be effected.

"Third—The committee reaffirms E. P. R. No. 30 in its present form. Presented on behalf of L. D. Bruekel, of the Weirton Steel Company."

The report of the Sheet Steel

Simplification Board of Review was made by Walter C. Carroll, President of the National Association of the Sheet and Tin Plate Manufacturers.

Mr. Carroll reported as follows:

"The committee held a meeting this morning, which was attended by H. R. Colwell, representing the Department of Commerce. The work looking to the enforcement of Simplification No. 28 has been continued for the six months since the last meeting, and the recommendation is made that no change or alteration be made in the simplification schedule as originally drafted." Mr. Carroll stated that for business reasons he was obliged to tender his resignation as chairman of the committee.

The Chairman said it was with regret that the Metal Branch received the resignation of Mr. Carroll.

The Chairman then appointed Wm. L. Latta, sales manager of the Sheet Division, Wheeling Steel Corporation, as chairman of the committee.

The final address of the Metal Branch meeting concerned itself with "How Can the Distributor of Sheet Metals Secure a Larger Volume?" The subject was very ably and extensively treated by S. A. Knisely, Director of Advertising and Publicity of the Sheet Steel Trade Extension Committee, Pittsburgh, Pennsylvania. In order to read how well Mr. Knisely handled this subject, please turn to page 154.

Michigan Standard Built-Up Roofing Specifications Are Presented to Architects

At a meeting of a special committee composed of architects and general contractors, held in Lansing, Michigan, on Wednesday afternoon, October 12, the Michigan standard roofing specifications which the Trade Extension Board has been working on for the past two years were presented. A. B. Lewless, William Busch and F. E. Ederle were in attendance and explained the purpose and various details of these specifications. Both the archi-

tects and the contractors seemed to be very much interested and a favorable report is expected.

Grand Rapids, Michigan, Sheet Metal and Heating Throw Big Party

To start the fall meetings off with a lot of pep and enthusiasm the Grand Rapids, Michigan Sheet Metal and Roofing Contractors threw a big dinner and dance at Little Pine Island Lake recently. About 75 people were in attendance to enjoy one of the finest chicken dinners that was ever served to anyone, anywhere.

Following the meal, President Don Lamoreaux informed the crowd that he had made no definite plans for speakers, as the evening was to be devoted strictly to a social session. However, he called upon Harry Rhodes, W. C. Hopson and Wayne "Brig" Young for a few remarks, the latter two expressing great delight of the fact that the Grand Rapids Jobbers had been included in the party.

Of course, Harry Rhodes couldn't dance much, that is, after everyone went home and the orchestra stopped playing. Following several circle two-steps and fox-trots, "Home, Sweet Home" was played and the merry crowd started for home,

for Worrying About the Business He Didn't Get

There is a lot of difference between thinking and worrying. Every business man must spend much time thinking, but he has no time for worrying.

Thinking develops ideas. It plans big things. It builds. Thinking is constructive. It makes men strong. But as soon as thinking becomes disorganized, jumbled and confused worry begins.

Worry tears down, destroys and weakens. It results from a confused mind or a body in need of repair. With a calm mind and a sound body, thinking does not weaken a man. Worry is not the result of thinking. It is the result of trying to think under the wrong conditions.

Outlining Need for More Effective Cooperation Between Mills and Distributors

Jobbers Forced Into Hand-to-Mouth Buying by Circumstances

By WALTER C. CARROLL*

IF any of you have made a search through the several dictionaries which are available, for a definition of a jobber, it has no doubt occurred to you that there is no mention of profit in that part of the definition which attempts to define the distributor of sheets as we know him today, or have known him during the past twenty-five years. We find that a jobber is "one who buys goods in bulk from the importer or manufacturer and sells to the retailer; a middleman."

These definitions are generally divided into parts one and two, and we can throw the second part into the discard, for it reads about as follows:

"One who transacts business, especially public business, so as to obtain unfair advantage or profit for himself or another."

Perhaps if we could find a definition of a mill, especially one which correctly defines a sheet manufacturer, we would again be impressed with the absence of any mention of profit. It may be that those wise heads who framed definitions in the old days, could foresee the situation in which many jobbers and mills find themselves today.

Who Was Entitled to Be Called Jobber

Let us briefly trace the part which the jobber and mill have played during the last twenty-five years, and determine, if possible, who in these early days of the sheet steel industry, was entitled to be called a jobber, or more properly, a distributor of sheets. Was he not one who had a substantial investment in

warehouse property, to which point carloads of merchandise were shipped, and where an effort was made to carry well-assorted stocks at all times, to serve his locality by distribution from his warehouse? Is it not true that profits derived from such distribution, were generally satisfactory? This method of distribution surely was the logical one, for it was based on personal contact, accessibility of stock, and satis-



Walter C. Carroll, President,
Tin Plate Manufacturers

factory service. While the aggregate annual tonnage so distributed may have been large or small, the dividing line between jobbing and mill business was the carload quantity.

Even in these early days a progressive and growing consumer of sheets felt justified as his purchases amounted to carload lots, in approaching the mills, and history might also record the fact that certain mills cast more than a pleasing glance at those accounts which continued to show a healthy growth.

Differences of opinion as to who should control these accounts which were growing to carload proportions were usually settled in a friendly manner, especially when the consumer became a frequent carload buyer, and therefore a mill customer.

Hand-to-Mouth Buying Appeared to Be Jobbers' Salvation

Much could be said in connection with that most interesting decade, 1905 to 1914, and even more might be added if the war period were taken into consideration; but in my opinion, our present unhappy situation is a direct result of the practice which crept into our business promptly following the armistice. Warehouse stocks were inflated both as to quantity and value. Business was flat on its back. It is possible that hand-to-mouth buying in its present acute form might not have become a permanent practice had this lesson of the early months of 1919 not been repeated with emphasis during the year 1921. But, having learned the same lesson twice within three years, the decision of jobbers to control their buying, or to buy from hand-to-mouth, seemed to be their only solution, if not their salvation.

Having made this decision, the problem was comparatively simple. Steel was available from mills for almost immediate shipment. Railroad efficiency had reached a point which made it unnecessary to take time for transportation into consideration. Simplification and standardization were also playing important parts.

But what is now happening in the producing end of mill organizations, not to mention their clerical departments? Orders for an initial carload, while pleasing indeed, have replaced orders which in the old days

*Address by Walter C. Carroll, President of the National Association of Sheet and Tin Plate Manufacturers, delivered at the Metal Branch meeting of the National Hardware Association of the United States, Tuesday, October 18, 1927, Atlantic City, New Jersey.

called for one or two hundred tons, with individual items which were attractive. Supplementary orders to be included are now received almost daily up to time of shipment. Appeals for direct shipments to customers are substantially increased, so that in many instances mill shipping departments are going through all the motions for which a distributor is compensated, without taking the greatly increased cost of doing business of this character into consideration; or if the increased cost is definitely known, little or no attempt has been made to pass this additional charge along.

Mills Often Encroach Upon Jobbers' Prerogative

This is the situation in which the industry finds itself today, but it is aggravated by the fact that some distributors, in order to build up volume, aggressively solicit carload business, and some mills encroach on the jobbers' prerogative.

If even a fair profit were being made by either jobber or mill, there would be little need for any discussion on this subject, but both mills and distributors are suffering because of vanishing profits; and if a solution can be found which is entirely legal, let us hope that something definite will be done.

In this country we are producing during a normal year about 4½ million tons of sheet mill products. We have a capacity that approaches 5½ million tons. These figures do not embrace the new strip mill units with which you are familiar. Of this 5½ million tons, about 650,000 tons pass through jobbing channels, either through stock or by direct shipment. Thus 12 per cent of capacity and 14½ per cent of production go into consumption through jobbing channels.

Direct Shipments in Car and Less Cars Are Increasing

No figures are available which will show the extent to which shipments to stock are decreasing, or shipments direct to jobbers' customers are increasing, but direct shipments, both carload and less-carload, are increasing, and warehouse business is suffering to an extent which has caused a gradual

net decrease in the percentage which jobbers' business bears to total production. The growing portion, namely, direct shipments, appears to be handled on a very narrow margin; in fact, so narrow as to warrant the statement on the part of some distributors that there is an actual loss, or if there is a profit, it is so small as to be little more than negligible.

But what are we going to do about the mixed cars of wire, sheets, pipe and what not, which are being shipped by some jobbers, and also some mills? Business of this character, it seems to me, does not classify the buyer as a carload customer. Several different products are required to make up a carload, and the accommodation which is rendered the buyer should be sufficient to entitle the jobber to the necessary compensation for service.

The causes for the present situation have been briefly reviewed, principally because it is most difficult to find a solution to our problem. We must at all times keep within the bounds of the law, but as we know, there is absolutely nothing to restrain an individual from exercising good business judgment in the conduct of his commercial affairs.

See No Logical Reason Why Mills Should Compete With Jobbers

If there could be a dividing line between the business which belongs to the mill and to the jobber, this subject would not appear on our program, but there will always be some difference of opinion on this point. It is well known that the competition which exists between jobbers is most acute, but it can be safely stated that so far as this phase of our business is concerned most any mill executive who is responsible for profits would gladly exchange his position with some of you jobbers represented here this afternoon.

These conditions in our two branches of the industry will always prevail, but there is no good or logical reason why mills should compete with jobbers, or jobbers with mills. These two fields of competition should be kept separate and

distinct. Unless this is done, co-operation cannot enter into the calculation.

The solution, it seems to me, is to be found in the building up of confidence which will justify the jobber in increasing his distribution from stock. This encouragement can only come through the elimination of competition from mills on less than carload lots. It must come through the reduction, if not entire elimination, of direct shipments for jobbers' account. These suggestions may be tasteful or distasteful, depending upon your viewpoint, but there is an important factor with which neither mills nor jobbers have as yet reckoned. It is the substantial increase in cost to mill organizations when called upon by the jobber to make up and ship small lots which surely is warehouse business. I am not going into the question of costs, but I know that if the proper extra were added by the mills to their less-carload shipments it would be sufficient protection to warrant the jobber in again building up his stock in readiness for calls.

There can be nothing illegal in securing for the corporation for which we sell a price which includes the increase in cost which arises through the handling of small lots. If this increased cost, or extra, is sufficient to compensate the mill, it will be sufficient to serve also as an encouragement to the distributor to build up his warehouse stocks, for the tendency of the time is to localize business activity and concentrate on that market which is near at home.

L. J. Mueller Furnace Appoints E. V. Daily Pacific Coast Distributor

The L. J. Mueller Furnace Company, Milwaukee, Wisconsin, announces the appointment of E. V. Daily as Pacific coast distributor for Gas-Era warm-air furnaces and Gas-Era steam, vapor and water boilers. Mr. Daily, for the past 11 years, has served as manager of the Gasteam department of James B. Clow and Sons, Chicago,

Creating Greater Markets for Sheet Steel Products by Advertising

Basic Principles of Buying Same Now as They Were 25 Years Ago

By STANLEY A. KNISELY*

WHEN I received Mr. Fernley's gracious invitation to take up fifteen minutes of an otherwise interesting program, I couldn't see the value in any contribution I might make. Certainly any attempt to tell you gentlemen how to run a business of which you have made a life study would be presumptuous. At first I contemplated the situation with considerable temerity, but the longer I thought about it the more courageous I became until finally I cast all discretion to the winds and accepted.

Reveals Uncommon Problems of Business

After all, I thought, what difference did it make if I had no experience selling sheet steel. Without much study I probably could enumerate the half dozen biggest problems facing the sheet metal jobber with sufficient appreciation of what those problems meant, to enable me to consider the subject with some intelligence. So, too, could several hundred thousand other men who have had a varied merchandising experience. I have sold suction sweepers, real estate and automobiles, men's clothing, paving brick and advertising. How, you may wonder, could that familiarize me with the problems facing a sheet metal jobber. The answer is that many of the major merchandising problems today are common to many businesses.

The price cutting competitor, and peddler of inferior goods; the maze of innumerable brands, and the manufacturer who sells direct; constantly diminishing profits and rising costs of labor and distribution;

Address of Stanley A. Knisely, Director of Advertising and Publicity of the Sheet Steel Trade Extension Committee, delivered before the Metal Branch meeting of the National Hardware Association, Atlantic City, October 18, 1927.

overnight changes in the whims of consumers and dealers who refuse to push our line—these and many others are the common problems of business. The man who sells shoes can discuss them with the man who sells cheese, and another beautiful

In this article Stanley A. Knisely, Director of Advertising and Publicity of the Sheet Steel Trade Extension Committee, Pittsburgh, has embodied the results of careful study and observation by a mind trained to analyze markets and their possibilities for future development. In this article, which was given by Mr. Knisely at the Metal Branch meeting of the National Hardware Association, Atlantic City, New Jersey, there are some very important comparisons drawn which if studied and thoroughly digested cannot fail to help every sheet metal contractor to a better understanding of the sheet metal industry as a whole, as well as the part he is taking in the development of that industry. Read it carefully and profit.

friendship, born of sympathetic understanding, has sprung up.

Like the poor, these problems always will be with us in some measure. Business men in many lines have been discussing them at weekly, monthly, quarterly and annual meetings for these many years. Doubtless it is the hope that springs eternal in the breast of man that keeps our voices strong enough to continue these protests year after year—a hope that since things can't

be any worse, and change is inevitable, they may be made better.

Since self preservation is the first law of nature and we have no desire to starve to death while awaiting this hoped for change, we must needs carry on and, after all, it is with the "how" of carrying on that we are, therefore, most interested.

The program says that I am to tell you how to increase the sale of sheet steel through the distributor. Furthermore, it says it in such a way as perhaps to convey the impression that I may have some secret formula to reveal here this afternoon for the first time. You have been misled. There is no magic word to turn the trick, no shortcut to the consumer's pocketbook.

We hear that business conditions are changing overnight, that in this day of the new competition the automobile, radio and bobbed head have altered everything. Fundamentally, that's wrong. The plot hasn't changed a particle. It's the same old play. To be sure, different characters are doing different things in a different way, but all are actuated by the same natural desires and are striving for the same goal as their brothers and sisters of the past generation.

Buyers Respond to Basic Principles Today as 25 Years Ago

The same basic qualities and instincts that made a successful merchandiser twenty-five years ago will make a successful merchandiser today. Buyers respond to the same basic appeals. The same merchandising ingenuity that sold a man a one-cylinder Cadillac a quarter of a century ago when what he needed was to pay off the mortgage on the home, is selling Lincoln sport roadsters today to the young couple that already owes the butcher, the baker and the ice man. It is the same old

stage. Only the atmosphere is changed. We have some new scenery or have re-decorated the old, and have simply shifted it around to present a different environment.

To the sheet metal jobber who is doing a real job of merchandising today—

1—By refusing to handle an inferior product;

2—By courageously running his own business rather than letting his competitor run it for him;

3—By working a staff of salesmen large enough to adequately cover the territory;

4—By employing, at good salaries, men who sell business rather than men who are forced to *buy* it by cutting prices;

5—By educating those salesmen to be of real service and assistance to his customers;

6—By employing well proportioned and well directed advertising to assist his salesmen, and

7—By recognizing that since he has no intention of establishing a direct contact with the ultimate consumer, he is dependent upon and must look upon the Sheet Metal Contractor and retail dealer as a secondary sales force and accordingly undertake to educate him to serve in that capacity.

To such a jobber I am unable to offer a single constructive suggestion, except to urge that he carry on with increased vigor and persistence.

The sheet metal jobber who isn't doing these things, isn't benefiting by a widely known and well understood experiences of every successful business in America.

In merchandising sheet steel or groceries we can be a constructive force or we can be order takers, and we reap our rewards accordingly.

In order to be able to lay something interesting before this meeting, I endeavored to get a cross section view of the metal jobbing business by sending a questionnaire to fifty jobbers. I got back five replies. Either I wrote a poor sales letter, or forty-five of the fifty are not interested in a cross section of the business, or my questionnaire arrived in the same mail

with one from the Department of Commerce, two from the Federal Trade Commission, one from the Department of Justice, one from the Secretary of Labor and eight from other miscellaneous sources, in which case mine was lost in the shuffle. Since I throw away nine out of ten questionnaires reaching my own desk, I have no quarrel with my brother for exercising the same privilege.

Since the organization of the Sheet Steel Trade Extension Committee, you gentlemen have been kept informed concerning our activities as we have gone along. To bring this information up to date I might briefly review that very considerable portion of our work that is of direct interest to the sheet metal jobber.

Today or tomorrow in Pittsburgh will come from the press, our first roofing booklet, entitled, "Steel Roofing—Its Use and Application." This booklet is designed to sell steel roofing. It explains the advantages of the material, illustrates its use on all types of building from the simple shed roof chicken coop to the elaborate and many-gabled city residence. It goes to great lengths to get across to the reader the "quality" idea, and informs him how he can make sure of getting prime sheets of the proper gauge. We very frankly state that due to unavoidable circumstances inferior material is occasionally found on the market, and we tell him how he can spot it.

This booklet will be followed shortly by two additional roofing booklets which will go into the most elementary detail in explaining how to apply all of the various forms of steel roofing; what kind of nails and washers to use; just how many nails to use and where they should be placed. We believe such a booklet can be studied with some benefit by a great many so-called experienced roofers.

Booklet to Show Uses to Which Sheet Steel Can Be Put

As soon as we can get to it, we plan a booklet for the construction industry, designed to illustrate the uses to which sheet steel can be put

in building construction. We further contemplate a booklet to the architect, dealing with the architectural uses of sheet steel. We already have, as you know, a cornice specification in the hands of the architects. These roofing booklets are designed primarily, as a piece of literature for those who send inquiries to us as a result of our magazine advertising. However, they should be given a much wider distribution through the offices of sheet steel manufacturers and through sheet steel jobbers. We are prepared to offer these booklets to any company at cost. To those who order large quantities, we will print the name of the company on the cover at no extra charge. If I were a jobber, I believe I could use a large number of these to distribute to my customers and to be re-distributed by them to potential buyers of sheet steel roofing. So much for the booklets.

At least half of our general magazine and trade paper advertising this year is of direct interest and benefit to you gentlemen. We are advertising roofing in three of the largest national farm publications, namely: *Country Gentlemen*, *Successful Farming* and *Capper's Farmer*. We are advertising to the contractor through *Building Age* and *American Builder* and to the architect through *Architectural Record*. We are advertising in *AMERICAN ARTISAN*, *Sheet Metal Contractor*, *Sheet Metal Worker* in an effort to reach sheet metal contractors. Our general aim in this latter advertising is to induce the sheet metal contractor to become more of a salesman. This much the manufacturer of sheet steel is doing to increase consumption, and incidentally increase the distribution of his material through the jobber.

A point I want to make is this. Since the trade extension work started, thousands of inquiries have been received in our Pittsburgh office for sheet steel in the form of roofing, cornices, ventilating equipment, etc. Within the last two months, we have received nearly 500 inquiries for our new roofing booklet. Why should the Trade Extension

sion Committee be getting all of these inquiries for roofing? Why shouldn't such inquiries, as a result of jobbers' advertising, be going direct to the jobber? Why shouldn't sheet metal contractors, as a result of their own advertising, be getting these inquiries direct? Volume is what you make it, and the recipe is common property.

Little Sheet Metal Advertising After St. Louis Tornado

As an apt illustration of why the sheet metal jobber is not getting more business today, I will conclude with a brief reference to "The Spirits of St. Louis." There is more than one.

All of us are familiar with Paul Revere and his great ride on the 18th of April in 1775. Comparatively few of us remember that two other Americans stood that night by their horses booted and spurred, and with their eyes glued on the North Church tower. Comparatively few know that these two men, in addition to Paul Revere, leaped into their saddles when the signal was flashed from that tower and plunged into the night in different directions, helping to spread the alarm.

General Prescott and General Dawes, the latter a relative of our fiery Vice President are little remembered, and only because they were not advertised.

Longfellow was a great copy-writer, without realizing it. By the same token, all of us are acquainted with "The Spirit of St. Louis." Many after-dinner orators have extolled the virtues of Colonel Lindbergh, have pointed out his courage, his careful planning, his skillful navigation, his marvelous endurance and best of all, his accomplishment of what he set out to do. But there is another "Spirit of St. Louis" that has not been so well advertised. A week ago last Thursday afternoon, at about 1 o'clock, a tornado swept through a residential portion of St. Louis. The story was told in the Friday morning papers all over the country. Friday evening two representatives of the Sheet Trade Extension Committee entrained for St. Louis. Upon arrival Saturday morning and following a hasty sur-

vey of the devastated area they called upon sheet metal jobbers, as well as the leaders of two sheet metal contractor organizations. They reported the wide destruction of property and the urgent need for service and concerted action on the part of the sheet metal industry. Thousands of feet of eaves trough and conductor pipe were waiting to be sold. The market was hungry for galvanized elbows.

Sheet steel ventilators by the score were required. The market for steel cornices was beyond the fondest hopes held by any sheet metal contractor twenty-four hours before. Skylights by the thousands needed repairing. The largest potential market for sheet steel was created by the fact that the age and present depreciation value of most of the houses in one large section did not warrant their being again roofed with expensive slate.

A manufacturer of composition roofing had already set up a tent in the devastated area and was stocking that tent with his material. Roofing contractors interested in slate had sent out a call to surrounding cities for helpers. The following item appeared in the *Globe Democrat*:

"Roofs of buildings in the path of the storm were damaged to the extent of more than \$500,000, it is estimated by Elmer L. Musick, President of the Master Roofers' Association. Demands for repairs for damaged roofs far exceed the facilities at hand. Efforts are being made to secure experienced roofers from other cities to aid local workers.

"The Master Roofers' Association plans to give its attention first, to repairing the roofs of industrial and commercial institutions, so that costly material and stocks of goods may be protected. Orders for repairing roofs of residences are being taken, however, and such work will have the earliest possible attention. Arrangements have been made for importing large forces of experienced roofers from Kansas City and other near-by cities."

The representatives of the Sheet

Steel Trade Extension Committee were unable to stir up any enthusiasm. The regular meeting of one sheet metal contractor's organization was to be held on Tuesday. The other association was to meet a week later. Suggestions that special meetings might easily be called were not seriously considered. When it was suggested that the local jobbers and sheet metal contractors could very profitably join hands in a little local newspaper advertising and thus publicly place their goods and their services at the command of those residing in the damaged area, the two local jobbers agreed to stand their share, but no one volunteered to stir up the contractors. The next day and for several days following, the newspapers were full of the advertisements of lumber dealers, dealers in lumber substitutes, dealers in shingles, prepared roofing, slate, tile and composition roofing, dealers in concrete products, furnaces, all manner of house furnishings, window glass, window shades and a hundred and one other products needed in the re-building which was started at once.

Sheet steel did not enter the picture in any active way, either organized or otherwise. It is this "Spirit of St. Louis" in which you gentlemen are most interested today.

Distinguishing Between a Store Keeper and a Merchant

A merchant knows what he is doing; a storekeeper guesses. A merchant carries a good stock, keeps it clean and well displayed and is prompt in serving his customers, paying and collecting his bills.

The storekeeper lets his bills and collections drag, and drags himself when waiting on his customers.

If you are not keeping pace with the ever-changing conditions, you are not making money.

Show me your store and I can tell if you are making a profit.

This reminds me of a story I heard. A boy was questioned by his teacher, "What gender is the cat?" The boy replied, "Show me the cat."

Indicating the Position of the Warehouse in the Steel Industry of Today

Buying Habits Have Changed While Some Sales Tactics Have Not Been Changed to New Times

By WALTER S. DOXSEY*

THE warehousing of steel cannot be considered as an enterprise self-contained and individual unto itself. As one of the important channels through which steel flows from the mills to the ultimate consumers, the warehouse must function as an integral part of the entire system of distribution. If the position of the middleman in this system of distribution is economically justified, then the warehouse must not be viewed merely as a customer of the mills, nor as a competitor, but as an active partner.

If we review the progress of civilization, we find that as each branch of industry developed from primitive fireside craftsmanship, the middleman system of distribution developed with it. The extent to which this is true marks the position of the middleman as one of the conspicuous characteristics of modern civilization and industrial progress. As our mode of living becomes more and more complex, the factors which influence the form of distribution of a product are altered, sometimes being multiplied and in other cases lessened. Each year, established traditions and firmly fixed customs of previous generations, are dispelled in the efforts to speed up distribution to the pace of present day markets.

War Born Impetus to Consolidate Not Yet Spent

With the dawn of the twentieth century came an era of combines and trusts and the momentum of these initial consolidations in industry carried us up to the outbreak of the world war. War with its insatiable demands brought plant expansions and capacities far beyond

our normal needs. Another wave of mergers was the natural outcome and even today, nine years after peace was declared, this war born impetus to consolidate has not spent itself. These amalgamations throughout our industries bear an important influence upon distribution, for as manufacturers become more powerful, the tendency to control distribution as well as production increases.

From purely an economical standpoint, to maintain and enhance his position as a vital factor in the distribution of steel, or of any other products or commodities, the mid-

In this address by Walter S. Doxsey, Editor of the Daily Metal Trade, Cleveland, subscribers to AMERICAN ARTISAN are given a very clear, concise picture of the position of the warehouse in the steel industry today. Mr. Doxsey is a thorough scholar, and what he has said can be read with benefit by everyone in the industry. His remarks on the efforts now being made to create bigger and more markets for sheet steel are especially interesting.

dleman must perform certain fundamental functions. He must render a definite service to the manufacturer as well as to the consumer, so definite in fact, as to answer frequently arising charges that prices to the user, and hence the cost of living, would be materially lowered if the distribution route were shortened—that is, if the warehouse or wholesaler were eliminated.

The economies effected by the wholesale house operating with a reasonable degree of efficiency offer an acceptable and convincing ex-

planation of its importance in the distribution of merchandise. The middleman brings materials and products from an endless array of manufacturing plants and supply sources scattered all over the world, swelling his stocks with an almost countless variety of items in many sizes and styles for the ready inspection of his clientele. This service is heightened by the experience and judgment of the wholesaler who has learned to select his wares judiciously and with a keen sense of relative values. To this very valuable service is added the ability of the warehouse to make immediate deliveries.

These factors, of sufficient value in themselves to justify the position of the wholesaler, give the buyer the additional advantage of small inventories, or rather of an extensive inventory, carried at the warehouse, available for quick shipment with little or no extra cost.

A most vital consideration which the self-styled economists and the manufacturers or mills frequently overlook when urging the elimination of the middleman is that the direct routing of merchandise from production source to consumer does not necessarily dispense with the middleman's services. When the maker undertakes to sell his products directly to the consumer, he is merely arranging to perform the middleman's services himself, hoping that he can show a saving by going into the wholesale business himself. Our mercantile history proves that the elimination of the wholesaler does not inevitably bring a reduction in costs. Frequently the opposite is true.

The prosperity of the steel mills, and your prosperity, depends upon the economical distribution of steel. The fundamental problem is the same whether 10 tons or 1,000 tons

*Address by Walter H. Doxsey, Editor Daily Metal Trade, Cleveland, delivered at the Metal Branch meeting of the National Hardware Association, Atlantic City, New Jersey, October 18, 1927.

are involved. Today we have an alleged excess of steelmaking capacity. The common concern is not who should get this or that order. The important individual and collective task which calls for the attention of the best minds in the industry is to sell more steel, to keep the mills running at capacity, to study markets analytically, and to bring to the steelmakers and distributors the business which competitors without the industry are appropriating while our minds are befogged with internal problems that add nothing to the sales volumes.

Market Studies Bring Greatly Increased Markets

Through scientific market studies the portland cement manufacturers have opened up tremendous outlets for their products. Patented roofings have made serious inroads in the fields once enjoyed by corrugated steel roofings. Activities of the Copper and Brass Research Association may well be emulated by the steel industry. In five years, the use of brass pipe for plumbing has gained 234 per cent. Aluminum furniture is already making its bow before the public. This metal is being used in motor car and bus body construction to the exclusion of many tons of steel each year. These competitive products have a right to their places in the sun of industry and commerce, but each of these is usurping business that once went to warehouses and mills and little or nothing is being done to uncover new markets to replace this lost trade and to widen the application of steel to expand sales totals.

Two important divisions of the industry have made gratifying progress in undertaking cooperative researches to develop new uses and new markets. The Sheet Steel Trade Extension committee and the American Institute of Steel Construction are aggressively fostering a sales approach which is based upon the service a product will render rather than upon the price per pound. National advertising is being employed in a modest way to sell steel in competition with other products. The leadership of these two splendid organizations should

be emulated by the entire industry.

The importance of an organized and concerted effort to sell steel, to merchandise it if you please, is emphasized by a review of the production department of the steel industry.

In the year 1900, 1901 and 1902 our annual consumption of steel rails was 2,175,000 gross tons. For the three years ended with December, 1926, the average was but 2,674,000 despite the fact that 1926 was one of the five 3,000,000-ton years throughout this entire period. In 1909 and 1910 the annual production of wire rods averaged 2,300,000 tons as compared with 2,700,000 tons in the good year of 1926. Thanks to the birth of the automotive industry, which takes about one-third of our present capacity for making steel sheets, the annual consumption of plates and sheets makes a better showing, having increased from about five million tons in 1910 to slightly more than ten million tons in 1926. Take away the automobile tonnage and the showing is not so good. As far back as 1906 we consumed four million tons of merchant bars as compared with five and a half million 20 years later in 1926.

Despite the fact that the total consumption of all steel products has doubled within the past 20 years, this growth has been due largely to the expansion of the manufacturing industries that, in many cases, were among the original customers on the books of the mills. For example, 3,000 tons of steel a year go into razor blades and another 5,000 tons into razors and containers. Telephones take 4350 tons a year. License plates require 12,500 tons. In the development of new uses for its products, the steel industry has, perhaps, been a laggard. Its growth has come through initiative in other businesses rather than through an organized effort to sell steel to the public.

Excess capacity, ever since the war, has been the generally accepted excuse for all the ills of the steel industry. Judged from modern engineering standards, this excess capacity is inefficient in character and it

is to be found in the finishing department of the business rather than in the branch which produces raw steel, that is, ingots and steel castings. Without doubt, wartime demands increased our steel making facilities far beyond the normal requirements of 1918, but nine years have passed since the war ended.

Normal Industrial Growth Reestablished

During these years, post-war readjustments have been completed to a very large extent and the normal industrial growth of the nation has been quite accurately reestablished. In 1926, a good year to be sure, but not a boom year, steel making plants were operated at 95 per cent of their practical capacity, according to figures furnished by the American Iron and Steel Institute. While 1927 will not meet this mark, we have every reason to believe that normal expansion will cause the producers to equal or exceed this total in a very few years. In fact, experience during the last 30 years of our steel making history shows we may anticipate a normal gain in the consumption of raw steel of approximately 1,200,000 tons annually.

Even 1927, which has fallen behind 1926 to the disappointment of many, shows a consumption of 88.54 per cent of the practical capacity for the first nine months. This practical capacity, by the way, is based on 50,500,000 gross tons of open hearth and bessemer steel annually and does not include crucible and electric furnace ingots. So far as the production of ingots and castings is concerned, therefore, I believe these facts give lie to the overproduction bogey and point to a necessary expansion of our facilities in the near future.

When we examine the finishing facilities of the industry, the picture we find is somewhat different. Although our normal demands for raw steel may be close to 100 per cent of practical capacity, a peak load has never been scored by the finishing department. I doubt if full output of bessemers and open hearths would require more than 75 per cent of the finishing capacity necessary to convert it into the

forms demanded by the consuming market. The variety of finished steel products is legion and it is only natural that the finishing capacity exceed the ingot tonnage by a round margin.

And in a measure, a portion of this excess finishing capacity represents an excess of inefficiency which must either be supplanted by modern equipment or else succumb to the march of progress.

That the consumption of steel has doubled in the past 20 years does not tell the entire story insofar as mill development is concerned. The remarkable advances made in the production departments of our steel mills are an outstanding tribute to our American engineers' ingenuity. The process of scrapping obsolete for modern equipment has required the investment of millions and not a few of the plants find the strides of progress a severe strain on their financial resources. In the leaner years the excess capacity factor, felt more keenly in the finishing mills, has had a depressing influence on prices. Mills with millions invested in new machinery feel the urge to book orders so that contemplated savings may bring some returns on their huge investments. Other mills, not so fortunately fixed with cost saving equipment, feel the urge to operate at capacity, so overheads will be minimized and the fatal day of reckoning will be forestalled.

Unfortunately the generally adopted scheme for bolstering sales volumes is to shade prices. Barren results from the oft-repeated moral that cut prices neither stimulate new business nor foster any profits would indicate that experience is a poor teacher. Characteristics of this tendency are the sheet steel prices of last spring and structural steel prices which prevailed particularly in the East last summer. This condition brings to mind one of the nursery rhymes of business:

There never was a product made,

This truth you must confess,
But what some guy could make it worse,

And sell his junk for less.

This applies to the steel business except that the quality of the prod-

uct is maintained despite the sales price.

Cause for dissatisfaction with the meager earnings of the steel companies is readily found in the average sales prices of the various products. During the past 10 or 12 years wages in the industry have advanced 200 per cent and the eight-hour day has been substituted for the 12-hour day. Freight rates on raw materials have jumped 90 per cent in 13 years. Yet the prevailing price of plates, shapes and bars is 1.75 cents a pound, base Pittsburgh, as compared with 1.70 cents a pound in 1907.

A typical illustration of selling in the steel industry came to my attention recently. The consumer inquired for 20 tons of a certain material. One warehouse with a mill contract of 1.75 cents, base Pittsburgh, quoted on the basis of 1.80 cents a pound, which provided a margin of \$20 on the entire order. The difference between the freight included in the quotation and the switching charge from the local mill provided an additional margin of \$51, making the total profit on this order of approximately \$1,000, about \$71. The order was placed at 21.50 cents a hundred pounds under this quotation.

In a recent paper, Charles F. Abbott, executive director, American Institute of Steel Construction, calls attention to bids on work involving 1,800 tons of structural steel. Some idea of the wide variation in prices quoted can be gained from the fact that one price was \$39,000 lower than the next lowest, a difference of nearly \$21 a ton. Similar disparities are of too frequent occurrence and it is recognized that the buyers' confidence in the industry must be heavily jolted by such bids.

Buying Habits Changed; Why Not Sales Tactics?

Buying habits have changed. But in some organizations sales tactics have not been adjusted to the new times. Some of the executives directing this industry have arrived at their commanding positions through apprenticeships in production departments and this training naturally makes it difficult for them to

cope with sales problems. There is the inclination to demand, not develop sales. Their answer to competition is to say, "If Bill can handle the business for such and such a price, we can do it for less." Tonnage is their panacea.

From an economic standpoint there must be a minimum quantity of steel, a minimum package, so to speak, which the mills can handle with a profit. For convenience sake suppose we assume it is a carload.

In a recent month, one of our leading warehouses found the average size of its orders was 700 pounds. Larger orders from its clientele are going to the mills, not only because the mills are actively competing for this business, but also because these buyers believe the warehouse price is too high to pay for lots of 5, 10 and 15 tons of steel.

So the suggestion has been made that the warehouse price of steel, like that of the mill, be based upon a minimum size package or quantity, and that a service charge be made to cover the overhead involved in handling smaller quantities. And further, quantity differentials might be arranged for the larger size warehouse orders, up to a minimum carload, thus offering an appeal for the large volume of this class of business that is now going to the mills because of the big savings involved. Even should the mills accept less-car orders, there is no valid reason why their charges should be any less than those of the warehouses, for these orders involve service just as much as they do materials, and such service should be furnished on the basis of actual cost plus a fair profit. If such a scale be based on the cost of material, plus the cost of service, plus a fair profit, and if these charges be applied to less-car orders by the mills as well as by the warehouses, I am sure the tendency of buyers would be toward the warehouses. If the mills could be made to appreciate the cost of this service, if they knew it as thoroughly as you wholesalers know it, I am sure the desire of the mills for over-the-counter orders at carload prices would be quickly dispelled.

Constructing a Pattern for a Warm Air Furnace Canopy

Problem Met With Very Often in Warm Air Heating Installations

By O. W. KOTHE, Principal St. Louis Technical Institute

SOME folks use the trunk line system on warm air furnace work and run one or more trunk lines from the warm air canopy, as in this case we run two elbows, which go into opposite directions. The canopy is to miter to the first section of the elbows, so that what would otherwise be a 4-piece elbow requires 3 pieces, since the canopy is worked into making the other one.

Fittings of this kind are useful, especially where fan application is made, since here we have a positive flow, but with gravity heating it is also all right, but not so efficient, since there is considerable friction set up in this canopy and owing to the wide surfaces where the heat must pass over before finding exit in the pipes will cause considerable radiation and heat loss.

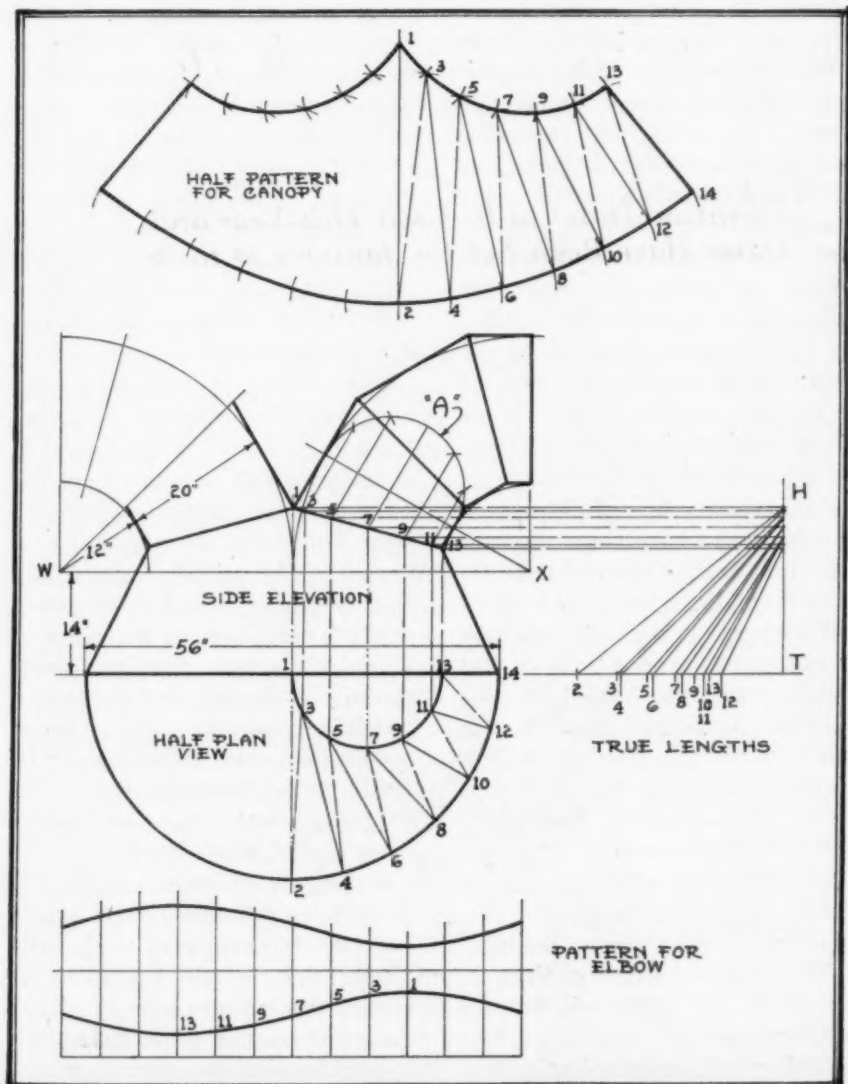
The point is to establish a height of canopy, as in this case it is 14 inches then measure the diameter as 56 inches. Draw the line W-X and from this detail the elbow elevations so the heels are tangent as shown. When this is done the miter lines must merge in point 1 of elevation and both sides can be brought up to fill out around the miter line and make the first piece of the elbow. This enables drawing the side lines as 13-14 of the canopy and also filling in the outlines for elbows. By means of section "A" we run lines into the miter 1-13 and from here drop them into plan.

To develop the plan we describe a semi-circle to suit the large diameter and then in developing the elbow opening we pick the sectional diameters from "A" and set them off from center line, as 3-5-7, etc., which enables drawing this curved line. By dividing the quadrant 2-14 into as many equal parts as shown, we can join to points in the miter

line of plan and so establish those triangular lines. Now the pattern for the gore of elbow is laid out much the same as any elbow pattern by picking girth from section "A" and setting it off and then picking length of lines with dividers, and this gives the pattern as shown. The spaces on the miter line 1-3-5-7, etc., will act as a girth space along the top of the canopy, because these two edges must fit together.

Now to determine the true

lengths we observe that each points, as 1-3-5-7, etc., of elevation establishes a different altitude and so these points must be projected over to a line, as H-T. Then with dividers we pick lines 1-2; 2-3; 3-4; 4-5, etc., from plan and set them as T-2-3-4-5, etc. When these points are joined by lines to the proper altitudinal point we have the true lengths and thereby grouping the several triangles over one diagram. This is more satisfactory than mak-



Patterns for a Warm Air Furnace Canopy

ing a separate triangle for each line of the plan.

Now to set out the pattern we draw a line as 1-2 to equal 1-2 of diagram. Here we always speak of the altitude as the point shown in elevation to correspond and then picking the space 1-3 from elbow pattern we use point 1 in pattern as center and strike arcs as at 3.

Now pick the space 2-4 from plan and using 2 in pattern as center strike arc as at 4, and pick true length 3-3 from diagram and using 2 in pattern as center cross arcs in point 3. Next use true length 3-4 and using the new point 3 in pattern of center, cross arcs in point 4.

With dividers describe arc 5 equal to 3-5 of elbow pattern and describe arc 6 equal to 4-6 of plan. Then use true length 5-5 and 4 in pattern

as center, cross arcs in point 5, after which pick true length 5-6, and using new point 5 as center, cross arcs in point 6. Repeat this process until points 13-14 are established and the pattern is finished. Edges for assembling should be allowed on the different edges where connections are made. All curves should be uniform and when they are not, forming hills or hollows, it is evident that some mistake has been made, and it would be folly to make up the work, because it would require trimming and the chances are, owing to pronounced flare of the canopy, the opening would soon get too large. But when the lines are used as we have described they should be of equal length, where the elbow joins to the canopy and no trouble experienced.

Indiana Sheet Metal and Heating Men to Stage Exhibit With Convention

Dennison Hotel to Be Used This Year and Dates Have Been Set for January 24 to 26

THE Convention Committee in charge of the joint conventions of the Indiana Warm Air Heating and Ventilating Association, the Sheet Metal Contractors' Association of Indiana and the Indiana Fur-Mets after a thorough canvass of the situation, have selected the Dennison Hotel at Indianapolis as the meeting place and headquarters for their convention January 24, 25, 26, 1928. Two considerations were paramount in making the selection; first, the advantageous layout which the Dennison can put at their disposal; second, the fact that it was the scene of the most successful convention and exhibit ever held by the Indiana Sheet Metal Trade. This was in 1921.

The hotel will turn over to the convention the main dining room on the second floor, together with a meeting room connecting to it and a smaller auxiliary room which also may be connected to it. The main room is ideal for exhibits,

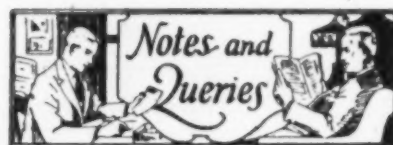
being up just one flight from the ground floor, with stairways, front and back, and freight and passenger elevator service adjoining. The meeting room will take care of 200 persons comfortably and is located just off the rear of the main room, so as to be away from the general noise and disturbances of the hotel. The delegates will walk the length of the exhibit room to get to and from the meetings, which will be interesting for them and agreeable for the exhibitors.

In going back to the location of the successful convention and exhibit of 1921, the convention committee is following the present policies of these associations, of conservatively holding on to everything that has proven out well in the past, while discarding what has failed or hampered progress, and at the same time not lacking courage to inaugurate innovations to serve their members more fully.

Experience has shown them that

a good exhibit is an attraction; also that it does not work well to have their meeting either in the exhibit room itself or on the other hand, to have it too far removed from it. At a later convention they tried at Cadle Tabernacle, having their meetings on the stage in the exhibit room, but the noise interfered with the meetings. In 1927 they tried having the exhibits on one floor and the meetings on another, but found that both exhibitors and delegates had a tendency to neglect meetings. In planning for the 1928 convention, the committee is taking advantage of the past experiences of the organizations, both in avoiding mistakes and in incorporating valuable features.

Arrangements have been made with the Dennison Hotel management to take care of members and their families at very reasonable rates. It is of course optional with the member where he shall stay, but as most members like to stay at the convention headquarters, the committee has made it possible for them to do so conveniently and economically.



Grates for National Furnace of Dayton
From Moncrief Heating Company,
837 South Walnut, Muncie, Indiana.

Kindly advise who sells grates for National Furnace of Dayton, Ohio, size 515.

Ans.—Kramer Brothers Foundry Company, Dayton, Ohio.

Repairs for Bernhard Boiler
From "Forshaw" of St. Louis, St. Louis, Missouri.

Kindly advise where we may obtain repairs for the Bernhard boiler.

Ans.—Ironton Bernhard Boiler Company, Ironton, Ohio.

Brass Angle Cog Wheels for Corn Poppers
From J. L. Willey, 1728 East 32nd Street, Des Moines, Iowa.

Please inform me where I can buy angle cog wheels of brass to use in making corn poppers.

Ans.—Chicago Stock Gear Works, 105 South Jefferson Street, Chicago, Illinois.

Random Notes and Sketches

By Sidney Arnold

"The essence of humor is sensibility; warm, tender fellow-feeling with all forms of existence."—Carlyle.

I had the pleasure one day this week of a visit from two of my old friends, F. H. Mason, who travels the western territory for the Warm Air Furnace Fan Company, Cleveland, and Max Bough, special representative of the Meyer Furnace Company, Peoria, Illinois. I surely enjoy these visits and my only regret about them is that they are not more frequent.

* * *

Heavy-Handed Hiram

With a gesture of impatience, the old farmer laid aside his paper and went to the door. "Come in," he said, but there was no reply. He closed the door and went back to his paper. Presently he went to the door again, with the same result as before.

"What's the matter?" asked his wife.

"That blamed dog," he grumbled, "has been scratching at the door to get in for the last hour, but every time I open it he runs away."

"That's not the dog," his wife replied. "It's the hired man writing a letter."

* * *

A tourist from the East had stopped to change tires in a desolate region of the Far West.

"I suppose," he remarked to a native onlooker, "that even in these isolated parts the bare necessities of life have risen tremendously in price."

"Yer right, stranger," replied the native gloomily, "an' it ain't worth drinkin' when you get it."

* * *

You know R. H. Harrison, Chicago representative of Rudy Furnace Company, recently became a papa. Last week while in church Roy heard the pastor speak of a baby as a new wave on the ocean of life. After church was over Roy approached the minister and said: "In your sermon you spoke of a baby as a new wave on the ocean of life."

"Quite so," replied the clergyman. "A poetical figure of speech."

"Don't you think," suggested Roy in a rather harassed voice, "that a fresh squall would hit the mark better?"

* * *

Rudy Guenther of the Accurate Sheet Metal Works had the floor.

"Yes," he was saying, "I've had many disappointments, but none like one that came to me when I was a small boy."

"Some terrible shock that fixed itself indelibly in your mind, I suppose?" I asked.

"Exactly," he replied. "I had crawled under the tent to see the circus when I discovered it was a revival meeting."

* * *

I received a telephone call from Arthur P. Lamneck, Secretary of the W. E. Lamneck Company, on Wednesday of this week. Mr. Lamneck did not state the reason for his unexpected visit to Chicago, but he was inquiring the whereabouts of Les Taylor. I asked Mr. Lamneck when he expected to pull off the celebrated golf match with Tommy Richardson, of the Richardson & Boynton Company, as his partner and Les Taylor and Jack Stowell the opponents, but Art was noncommittal. He said rather evasively that Tommy Richardson had been unable to get out of New York. Of course I know that Tommy Richardson is a very busy man. But so busy that he couldn't play a game of golf?!!! Anyway, here's the way I've got this thing doped out. Art and Tommy expect their friends to put quite a bit of money on them when the match is finally staged. But they don't want their friends to lose any of it. So they sent Art on to Chicago to stage a little private game with Les Taylor to find out just how mean a club Les wields. Then he'll go home and stall for a while 'til he practices some more to perfect his own

stroke. Art sure has got a great head for the business in hand. But I think Les Taylor had a very important engagement out of the city on Wednesday of this week.

* * *

Cause and Effect

Romance is insidious. It creeps into the victims' blood and reduces them to an apathetic state in which they are bereft of intelligence and will power and believe they are supremely happy. Romance, in fact, is a form of sleeping sickness from which it takes the weaker sex longer to recover.

That's why so many of last June's bridegrooms are still getting their own breakfasts.

* * *

Novel Way to Set Man Aright

A man went to a newspaper office and complained that his death had been announced erroneously.

"Well," said the editor, "we never contradict anything we have published, but I'll tell you what I'll do. I'll put you in the births column tomorrow and give you a fresh start."

* * *

Unexpected Economy

Browne—"Did you give your wife that little lecture on economy you talked about?"

Baker—"Yes."

"Any result?"

"Yes, I've got to give up smoking."

* * *

Bright Prospects

"Yep," said Farmer Brown, "we expect considerable from our Jake at college this year. Durin' the summer he won the hog-callin' championship down at the county fair, and then he put in two months with them Japanese tumblers in Ringlin's Circus. Yep, I'll be purty much disappointed if he ain't made a cheerleader this fall!"

* * *

Who Wins?

Big Business Man: "Can't you read? The sign on that door means *Private*."

Book Agent: "I know—and I'm glad it's there. If there's anything I hate, it's being interrupted when I'm talking to a prospect."

Dowagiac, Michigan, Gets New Steel Furnace Co.—R. S. McNaney President

*New Company Capitalized at \$200,000—
Other Incorporators Are Dowagiac Men*

A FRANCHISE has been granted the Dowagiac Steel Furnace Company, Dowagiac, Michigan, by the secretary of state of Michigan to engage in the business of manufacturing steel furnaces.

The new company, it is said, is capitalized at \$200,000, with \$50,000 of the stock subscribed. Ralph S. McNaney is president, DeForest Carney, vice president; A. R. Geer, treasurer; Arthur Wick, secretary. All of these men are well known Dowagiac citizens. Other incorporators include George H. Little, Carl D. Mosier, Dr. George R. Herkimer, Merle Durren of Dowagiac, and Frank Butts of Niles.

Large buildings, formerly occupied by the Dowagiac Drill Works, that face the Michigan Central right of way, are to be used for the plant, and the spacious quarters are already being equipped and prepared for the opening of actual operations. Much of the machinery is already on the ground.

The shop will have a floor space of 18,000 square feet, with as much more space needed for expansion later, available. It will have a private siding the entire length of the plant, making shipping ideal. The main structure is 40 feet by 300 feet. The office will face High Street.

The product will be a steel furnace and will be the only steel furnace made in Michigan. Heating engineers and designers have been working on the patterns and plans for the past seven months and the furnace that has been desired by the men in charge has at last been realized, it is said.

"The oil burner has hastened the demand for steel furnaces, and we have one that will meet all requirements and carry a ten years' guarantee with it," stated Mr. McNaney.

"Most all dealers are now handling both the cast iron and steel furnace lines," said Mr. McNaney, "So there will be no competition on our part to secure dealers away from other lines. All we will seek to do is to solicit their steel furnace business."

As soon as the operation starts,

several prominent furnace men will be added to the staff, it is stated.

Here's How American Artisan Serves Its Readers and Advertisers

TO AMERICAN ARTISAN:

Kindly change my address on your mailing lists from 401 W. Franklin Street, Elkhart, Indiana, to Box 172 West McHenry, Illinois.

Thank you very much for the want ad you ran for me. It was the means of my securing a very satisfactory position with the William H. Althoff Hardware, West McHenry, Illinois. A. E. HERROLD



This Book was written for You—

and is yours without cost or slightest obligation if you will mail us the attached coupon, properly filled in. Beautifully illustrated, this book tells in text and picture the complete story of Recirculating Warm Air and the scientific "Standard Code."

THIS orange and black symbol designates the progressive furnace installer in your town whose installations are made in conformity with the "Standard Code" and carry the triple endorsement of this Association.



tion, the Furnace Manufacturer and the Dealer that your system will "deliver 70° of heat to every room with sub-zero weather outside." "Code" dealers only are pledged to make scientific "Code installations"

National Warm Air Heating & Ventilating Association

710 E. Long Street

COLUMBUS, OHIO

Send us your name and we'll send you free of charge an interesting booklet of valuable facts about home heating.



National Warm Air Heating & Ventilating Association, 710 E. Long Street, Columbus, Ohio
Kindly mail without cost or obligation, a copy of Health and Comfort with Warm Air.
(Please print name and address.)

Name..... St..... R. F. D.....
City..... State.....

Advertisement of the National Warm Air Heating and Ventilating Association
Appearing in the October Number of the Small Home—Full Page in Color

How to Protect Against Radiant Heat Through Basement Pipes

This Winds Up Series of Data Sheets on Standard Code

By L. W. MILLIS

Data Sheet No. 26

Protection from Radiant Heat
Through Basement Pipes

In Sheet No. 25 I called attention to the value of providing against the effect of runaway fires in the furnace and other accidental things that may cause temporary high temperatures in the warm air pipes. A still greater demand for protection is caused by radiant heat. I have referred to radiant heat in Sheets 1, 14 and 21.

All of the heat in the warm air pipes was obtained by air rubbing against warm surfaces. Most of it was wiped or scrubbed off of the furnace. Some of the heat from the heater was projected or radiated through the air inside the casing over to the lining of the casings. Such radiated heat had no effect upon the air it passed through; but it heated the casing lining. The air rising on both sides of the lining was warmed. Some of the radiant heat went on through the lining and warmed the outer casing. The air inside of the casing was warmed and went into the warm air pipes. But some of the heat was wiped off of the outside of the casing by air in the basement. Still more of the heat "radiated" to the basement walls and on through the walls into the earth. So far as the furnace man is concerned it is forever lost.

So long as you admit plenty of air into the casing to wipe off, gather up, and carry (convect) the heat upstairs, radiant heat inside the casing is not thought of as a menace. So far you may have thought of radiant heat as shining, or traveling sideways, from the furnace. There is also opportunity for radiant heat to

shine into the warm air pipes from the top of the furnace. For that reason care should be taken to know that radiant heat which reaches into the warm air pipes has a chance to pass through the pipe or an elbow into the open spaces of the basement before it strikes through onto wood. For this reason, elbows should be placed in such pipes near the furnace. The radiant heat will pass through the elbow and be dissipated into the upper part of the basement. Always get rid of radiant heat before a pipe comes near woodwork. In Sheet No. 23 I cautioned against running pipes directly up from the furnace without using elbows.

Data Sheet No. 27

The Completion of a Perfect Job

Although you may install an excellent job, it may fail to show its full value because it lacks a multitude of petty things that help to make it a perfect job. Therefore, be careful to make a final survey.

Be sure no crack or hole anywhere in the system will let air either clean or dusty from the basement into any portion of the ducts, casing or warm air pipes. Strip all such places with asbestos paper. Put sand or asbestos fiber on the canopy top to stop radiant heat from striking the woodwork about it.

If there is woodwork within 12 inches of canopy, hang galvanized iron midway between canopy and woodwork. If there are cracks in sub-floors that lead to register boxes, wad up asbestos paper and stop air flow into the system. Paper all openings around register boxes at floor line in basement.

If you have used a two-piece register, be sure to take the face of register out and put asbestos paper inside register box so no air can leak out against the wallpaper. There is always a little dust in the incoming warm air. The dust has a tendency to stick to the wall or wallpaper at register. It looks like soot and you can't talk fast enough to make people feel that it is not soot from the furnace. Therefore, keep the dust out and don't let any strike walls while it is hot.

If you have used a one-piece register (in wall) provide a means of folding the edge of the box around the register frame, or better still, make box with a slot for frame to go into and put cement into slot. Be sure all registers are drawn up tightly against wall or set snugly on floor. Be sure all valves and louvers work freely. See that all warm air pipes, ducts and smoke pipe are up to stay.

Examine draft chains; see that they are not in way of feed door. Be sure check draft closes tight. If you are short of chain pulleys, use big staples or bend up big nails so chains don't drag on pipes or timbers. Wire should be substituted for chain passing through staples or nails to avoid chain catching.

See that chimney has no unclosed openings in it. Take one good look at the warm air pipes, elbows and register connections, and think of your "Tin Lizzie" running along easy grades and easy bends. Take a look also at the return air ducts and think of a big load of slow moving hay that must have plenty of room and big free corners to pass through. See if the job meets

your honest-to-goodness approval. If not, don't try to "get by," but fix it at once. Then draw down your money, knowing that you have given perfect service to the last cent.

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In this issue are published the concluding numbers of the series of Data Sheets written by L. W. Millis, Secretary-Treasurer of the Security Stove & Manufacturing Company, Kansas City, Missouri.

These Data Sheets were written by Mr. Millis for the benefit of the warm air furnace installers who are interested in getting a more readily understandable interpretation of the Standard Furnace Code. In the series Mr. Millis has taken the Code from beginning to end, discussed its various phases, clearing up certain phases which appeared to have more or less ambiguity.

In addition to publishing the concluding numbers of these Data Sheets, AMERICAN ARTISAN is including in this issue an index by subject of the Data Sheets and alphabetically arranged.

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National Hardware Association Meets at Atlantic City

American Hardware Manufacturers Also Hold 33rd Annual Convention

THE Thirty-third Annual Joint Convention of the National Hardware Association of the United States and the American Hardware Manufacturers' Association was held in the Marlborough-Blenheim Hotel, Atlantic City, New Jersey, this week, with the attendance of one of the largest delegations of hardware men that has ever attended this national meeting.

President W. H. Donlevy, of the Carter, Donlevy Company, Philadelphia, made the opening address. Excerpts of Mr. Donlevy's address follow:

"It is my privilege to extend to you a cordial welcome to the opening session of the Thirty-third Annual Convention of the National Hardware Association.

"Intense rivalry and competition prevails in every walk of American commercial life, and with the prospect of keener foreign competition, business men should avail themselves of every legitimate means within their reach to bring about a more profitable situation in the field of distribution.

"Trade associations are not always given their proper value by members. Our organization should be regarded as a department of our business, and our convention should be a clearing house of ideas, experiences and suggestions, by means of which we can step up to a higher plane of service and efficiency.

"There are four distinct methods by which a manufacturer can market his product:

"1. By selling exclusively to the wholesaler.

"2. By selling direct to the retailer.

"3. By selling direct to the consumer.

"4. By selling to the consumer through the manufacturers' own retail stores.

"Each of these methods has its

advocates and defenders, and each has its special value or advantages, according to the nature and use of the article and the views of the maker.

"We believe the widest distribution at the most economical cost is obtained by the manufacturer selling exclusively to the wholesaler, and if it were necessary, we could give abundant reasons for the faith that is in us. The economic value of the wholesaler has been so long and firmly established that it would be superfluous for me to attempt any defense of him at this time.

"If by any combination of circumstances the wholesalers as a class should ever be eliminated, and I do not believe this can occur, it would be a calamity for the manufacturers as well as the retailers and ultimate consumer.

"Of great importance to the hardware industry is the recently formed Hardware Council. This body is composed of representatives of the three branches—manufacturers, wholesalers and retailers. The Council has already devoted much thought and energy to the problems surrounding the trade.

"It has discussed the situation from each division and from every angle and will continue to do so, and has submitted through the booklet entitled 'Trade Betterment' suggestions and recommendations that are worthy of our serious consideration. Being a fact finding body, it will, I believe, be able to suggest possible solutions of some problems which have apparently heretofore not been solvable.

"The unusual demands emanate from the consumer through the retailer and are frequently unnecessary, and arise as a result of the intense competition for the consumer's dollar. Surely there should be some method by which each factor in the chain of distribution

should be reasonably repaid for the service rendered.

"Our relations with the American Hardware Manufacturers' Association are of a friendly character. We are glad to express our appreciation of the continued constructive work of the National Retail Hardware Association, and congratulate them upon the energetic manner in which they are meeting the problems which beset them. The National Hardware Association desires to cooperate with them in every legitimate way.

"That the people are, generally, prosperous is indicated by their tremendous spending power. This is evidenced by the great audiences which nightly crowd the theaters throughout the land and by the increasing purchases of automobiles and radios, and by the vast exodus of tourists to Europe during the past summer in search of pleasure at an expenditure of enormous sums. As an offset to this seeming extravagance there are healthful signs of thrift.

"The country is in a sound economic condition, and while certain readjustments in some industries are always necessary, there is no cause for gloom, and we can approach the coming year with a feeling of assurance that a generally prosperous condition awaits us."

Happenings of the Chicago Hardware Special to the Convention

Hats off to "Ned" Swift and "Bob" Jones (in society I believe it is Edward R. and Robert B.), but Ned and Bob they have been and always will be to the hardware folks.

The Hardware Special to Atlantic City was a success—even the committee in charge admit it. Not a dull moment; everybody visited, acted foolish, and from the noise and giggles, you would have thought a bunch of high school "kids" were out for a merry time.

Undenied Progress




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THE FINEST elbow ever made. Double lock seamed on the outside — added strength where it is most needed, an exclusive Barnes feature. Twice the usual number of crimps—less distortion of metal—smoother curve—angle more accurate—longer taper—easier fit. Accurate as to size and full weight guaranteed. Every elbow plainly trade-marked, with size, gauge and angle.

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THE unusual merit that characterizes Barnes Products is the result of a dominating spirit of undenied progress throughout the organization. Because of this unquestioned leadership, "As good as Barnes" has become a common expression in the trade. To serve you better than you were ever served before is our constant aim and ambition. On this basis of a square deal for all we invite your business.

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Portability

Repair jobs do not respect convenience. On one side of the plant there is a steam leak that must be stopped quickly by oxwelding. Or, a machine breaks on the other side of the plant. Again a hurry call for the welder. Time after time oxwelding equipment must be transported with speed.

Then the convenience of moving a cylinder of Prest-O-Lite dissolved acetylene becomes apparent. The WK cylinder contains about 270 cubic feet of gas and weighs much less than even the smallest welding type generator; the WC size (100 cu. ft. capacity) offers a still greater factor of portability. That is why cylinders are always used where portability is essential.

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31 Plants — 101 Warehouses

Prest-O-Lite

DISSOLVED ACETYLENE

Mention AMERICAN ARTISAN in your reply—Thank you!

Ed Corcoran, city passenger agent of the B. & O., and his crew deserve no small share of the praise for the success of the trip.

The ladies were well remembered. Cut steel slipper buckles, corsages of orchids and lilies of the valley, and two-pound boxes of candy were their lot, and as for the men—well, just ask them, but be sure that Volstead is about a dozen miles away.

Again I say, hats off and three cheers for Bob and Ned.

The evening banquet was a riot. Families were separated; dignity forgotten; and again our committee showed wonderful foresight in their arrangement of dinner partners.

F. J. Camp of Des Moines had the honor of escorting the youngest flapper on the train to dinner—little eight-year-old Beatrice, who, true to her sex, almost deserted him for J. D. Merriman.

Hosts

AMERICAN ARTISAN.

American Chain Company.
American Screw Company.
American Steel & Wire Company.
Atkins & Company, E. C.
Burgess Battery Company.
Cleveland Twist Drill Company.
Cleveland Stone Company.
Clyde Cutlery Company.
Continental Screen Company.
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Corbin Screw Corporation.
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Disston & Sons, Henry.
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Fairmont Tool & Forging Company.
Hart & Cooley Company.
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Lockwood Manufacturing Company.
Lovell Manufacturing Company.
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McKinney Manufacturing Company.
Milwaukee Corrugating Company.
Payson Manufacturing Company.
Pittsburgh Steel Company.
Reed & Prince Manufacturing Company.
Reynolds Wire Company.

Richards & Wilcox Manufacturing Company.

Russell & Erwin Manufacturing Company.

Sargent & Company.

Stanley Works, The.

Surpless Dunn & Company.

Toledo Wheel-Barrow Company, The.

Village Blacksmith Folks, The.

Western Cartridge Company.

Winchester Repeating Arms Company.

Issues New Catalog of Forming Dies for Power Presses or Brakes

A catalog designed to acquaint the sheet metal trade with the possibilities of the dies made in their shops is issued by the LaSalle Machine Works of Chicago, Illinois.

The accompanying illustration is taken from the catalog D10-27 and shows a few of the shapes. Besides the many dies shown in the booklet, the company states they specialize in making special dies to order for power press brakes and all branches of the metal working industry.

The company also specializes in sheet metal stamping of all kinds on small or large quantities.

The company also manufactures a line of hand power tools, such as shears, punches, angle cutters and notchers and power punch presses.

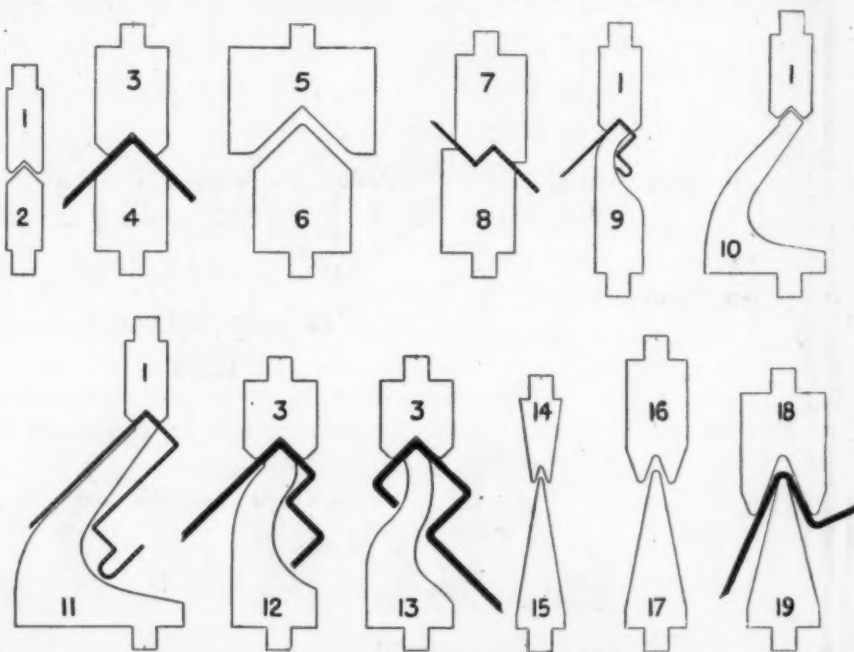
Catalogs illustrating the dies and the line of machines can be had by addressing the company at 3017 South LaSalle Street, Chicago, Illinois.

C. F. Malone Has Memory Jogged by John C. Neuman

Here's a little communication from C. F. Malone, 1414 Iowa Street, Davenport, Iowa, of the International Heater Company, remarking on an article which he saw in *AMERICAN ARTISAN* which brought back memories to him. Mr. Malone writes as follows:

"I noticed your little write up in regard to the pin tray made from the tin taken from Mr. Lincoln's home in the city of Springfield, Illinois, this brings back to my mind the days of long ago, I had forgotten the year that the incident happened, and I see Mr. Neuman states it was 1901. I was in the city some little time after that, and John as he was affectionately called, was making a little house, supposed to be a correct model of Mr. Lincoln's home, and he told me the story of the roof that he had just taken off, which was on 44 years, and we both remarked that it was better tin than you could buy in the market today.

"So John gave me some of the tin, from which the writer made a



A Page from the Catalog



New Bedford, Mass.
May 17, 1927.
Central Alloy Steel Corp.,
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Gentlemen:

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It is soft and very easy to han-
dle. If the seam is not right you
can turn it back and turn again,
and in forming furnace pipe you
can form it just as you want to,
where steel will spring out of place.

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WRITES Edward F. Penney,
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ney is just one of thousands of sheet
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install to make the
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place more reliance in his workman-
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Philadelphia Los Angeles Tulsa

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few ash or pin trays, and while one of them rests on my desk, I have lost track of the piece of tin, and the trays I made other than the one I have here, and it always brings back to memory the days that we made Springfield, and could always count on John for an order.

"John Neuman is the only man that the writer ever called on, that never turned us down at any time; sometimes I wondered if he really needed the goods, but on our next trip there was an order forthcoming. One time we remember we came into Springfield on an early train, about 5 a. m., and who should be getting on the train but John, going to the fair at St. Louis.

"I immediately rushed to him, and it flashed through my mind, 'here is where my pitcher is broken at the cistern,' and when we had said good morning and a few other words, he said send me a 24-inch and a 26-in. furnace, and so a good record was continued, and remained so until I passed out of the picture into other territory.

"Long live John C. Neuman, one of the finest."

Human Beings, Not Master and Servant, Run Business Today

The relation of master and servant is being displaced in American business by the relation of human beings engaged in common cause, Owen D. Young, chairman of the board of the General Electric Company, declared at the recent dedication exercises of the George F. Baker Foundation of the Graduate School of Business Administration, Harvard University.

"We are trying to think in terms of human beings—one group of human beings who put their capital in, and another group who put their lives and labor in a common enterprise for mutual advantage," Mr. Young said.

"We are learning as one result of our widespread prosperity that the human being who puts his capital in is no longer the gentleman of the cartoonist in need of fat-reducing exercises. It is rather the lean

school teacher, the small merchant, the carpenter, the blacksmith, who are trying to conserve and increase their surplus earnings as a guaranty fund against disaster. Or if it be not they directly, it is most likely to be the insurance company and the savings bank which are investing the savings of millions of our people of all classes in the capital of widely diversified concerns.

"We think of managers no longer as the partisan attorneys of either group against the other. Rather we have come to consider them trustees of the whole undertaking, whose responsibility is to see to it on the one side that the invested capital is safe and that its return is adequate and continuous; and on the other side that competent and conscientious men are found to do the work and that their job is safe and their earnings are adequate and continuous. Managers may not be able to realize that ideal either for capital or for labor. It is a great advance, however, for us to have formulated that objective and to be striving toward that goal."

Man Has No Time Selling Satisfaction by Selling Yourself to Your Community

When a prospect comes to you with a request to make repairs or renew a roof, skylight, metal work or warm air heating system, it is nine chances out of ten that he has formed an opinion that you are well able to give him a satisfactory job. If he has been recommended by one of your customers he has gained certain information from him concerning you, and because he seeks you usually it means the recommendation is in your favor because your work has proven satisfactory. This places you in a preferred position even as against lower prices.

It is then that we either make mistakes or come out with "flying colors" and a profit.

Then is the time to sell yourself to the prospect and "back it up" with courtesy and satisfaction, which adds one more to your satisfied customer "mailing list."

The "wagging tongue" of a satisfied customer is the best advertising medium we can have.

There is no doubt we all occasionally meet one whom it is hard to satisfy, but if we have done our part satisfactorily we can patiently analyze his complaints, and if we know our job, prove each objection is overcome in its turn. One such case came to our notice during the last sixty days, and while it was a trial to satisfy, yet in the end an admission was gained that the job was satisfactory and good feeling existed.

Oftentimes through our enthusiasm we overstate the satisfaction that will be received from our work. This, of course, leads the customer to expect more than is possible to give him.

Successful Collections from Delinquents Requires Definite System

To secure the best possible results the dealer does not want to undertake the work of collection in a half-hearted manner, as if he did not expect to secure payment of accounts. He wants to give the impression to his debtors that he really does want the money that is due him, and he wants to persistently follow them up until he secures payment.

Collection work should be undertaken in a systematic manner. System is lacking in the methods of too many dealers, who select accounts for collection at random, sometimes overlooking some that it is most urgent that should be collected, because of the possibility of them passing into the "bad debt" class if collection is delayed. Then again, many of them fail to follow up demands for payment in the manner that they should. This weak point is a bad one, because when collection is taken up again the debtor remembers that you were not very persistent in your previous demand.

Collection work should be systematic and should at this time especially be given more than ordinary attention.

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Thousands of sheet metal men know our famous HAND MADE roofing tin—The highest quality, longest lived roofing tin in the world. Formerly called "Taylor's Old Style," but since 1905, known all over the U. S. A. as

TARGET AND ARROW ROOFING TIN

But there are times when competition is so keen that even the slight additional cost of Target and Arrow prevents its use. For this reason we have gotten out the best machine made plate that it is possible to make. It is known as

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40 lb. Copper Bearing O. H.

Our distributors, located in all parts of the United States, carry ample stocks of both these brands of plate. It will pay you to get their quotations today.

N. & G. TAYLOR COMPANY
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Headquarters for Good Roofing Tin Since 1810

Good Week in Structural Steel Sustains Market —Demand in Other Finished Lines Lighter

Pig Iron Market Is Quiet—Nonferrous Metal Prices Appear Irregular

AN UNUSUALLY good week in structural steel has averted a settling of finished steel demand to a still lower level. The 61,800 tons placed with a Pittsburgh fabricator for the towers and floor of the Hudson river bridge at New York sets a new high record in structural awards. Bridge and structural work pending at Cleveland totals 23,000 tons. Three bridges in the Mississippi valley and another at New York promise further tonnage.

New business in other finished steel lines, in the aggregate, has been lighter the past week and operations in some branches of the industry are nearer 50 than 60 per cent. Tonnage users of steel generally remain aloof from the market, and in the automotive industry the tendency is downward.

Prices, especially of the lighter steel products, have become more sensitive to slack demand and the market is becoming increasingly difficult to ascertain. To corral attractive business producers frequently offer sharp concessions, then return to the stated levels. Irregularities in sheets, strip, pipe and wire products are more marked.

Pig Iron

At Pittsburgh division of an order for three grades of pig iron for one concern is the only feature in the pig iron market. The order was distributed among three producers, including two steel companies and one merchant furnace interest, each getting about 400 tons. The prices of the three grades were \$17, \$17.50 and \$18, valley, or valley basis. This transaction further served to establish \$17.50, valley, as the price of No. 2 plain foundry iron, since strong efforts were made in the past three weeks to break that price and they proved fruitless.

Otherwise the market is more

lifeless than at any time in the past six months. One interest sold two carloads of No. 1 iron at \$18.50, valley. A steel company sold 75 tons of No. 2 iron at \$17.50, base, valley.

Announcement of the reduction in the price of northern pig iron from \$19.50, base, Chicago furnace, to \$18.50, base, has failed to speed up sales for the remainder of the year to any marked extent. The price reduction serves to keep out iron from outside territories and enables Chicago district sellers to meet competitive conditions more easily outside the Chicago district, where it had been found necessary to dip considerably under the recent \$19.50 price to compete in northern and eastern Indiana and western Michigan.

Several fair-sized orders are appearing for first quarter pig iron, including one for 1,500 tons, which was closed at \$18.50, base, furnace. One lot of 400 tons was sold for early shipment. Several tonnages of silveries have been placed at the reduced prices.

At Birmingham many small orders for pig iron are being reported and deliveries are quick. No. 2 foundry is firm at \$17.25. The make will show a little deflection this month, although 19 furnaces remain active.

Copper

The copper market has been firm at 13.25 cents, Connecticut, and $\frac{1}{8}$ to $\frac{1}{4}$ cent more in the midwest during the past week. Moderate business was done, mostly for early shipment, with neither users nor producers doing much in the way of December business. There was a little interest in metal for January, but producers discouraged it. Export business continues good and the price was advanced 10 points to 13.60 cents, c.i.f., European port.

Tin

Users of tin bought heavily on two days recently, some for distant future delivery and some for the current month. This action was reflected in strength after the market had gone to the lowest level this year in London and almost that far down here. But as soon as buying support ceased the market again turned easy.

Lead

In London the lead market has continued easy, despite a display of strength in this country. Some business was done as high as 6.30 cents, New York, but this level did not become firmly established, due to the easiness in London. Refined lead stocks were cut in September and production appears to be under control. At the moment the market is better balanced than it has been in the recent past.

Zinc

Zinc prices held fairly steady throughout the week, but the level of the market now is slightly lower than a week ago. Buying has not been active and consumers' needs appear to have been fairly well covered by recent purchases.

Solder

Chicago warehouse prices on solder are as follows: Warranted 50-50, \$36.25; Commercial 45-55, \$33.25; plumbers', \$30.25; all per 100 pounds.

Old Metals

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$17.00 to \$17.50; old iron axles, \$19.50 to \$20.00; steel springs, \$14.25 to \$14.75; No. 1 wrought iron, \$11.00 to \$11.50; No. 1 cast, \$12.75 to \$13.25, all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 9 cents; zinc, $3\frac{1}{2}$ cents; cast aluminum, $13\frac{3}{4}$ cents.

Steel Buyers of the Middle West!



Indiana Harbor Works

INLAND STEEL COMPANY—with its plants conveniently located (at Indiana Harbor, Indiana; Chicago Heights, Illinois; and Milwaukee, Wisconsin)—controlling its manufacturing operations from ore to finished product—maintaining a corps of experts to aid you in your steel problems—is a logical source of supply for your requirements of:

RAILS
BARS
PLATES
SHAPES
SHEETS



INLAND STEEL COMPANY

FIRST NATIONAL BANK BLDG.

CHICAGO

—Branch Offices and Representatives:—

St. Louis

Milwaukee

St. Paul

Kansas City

New Orleans

El Paso

Salt Lake City

Mention AMERICAN ARTISAN in your reply—Thank you!

Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON

Chicago Fdy., No. 2	\$18 50
Southern Fdy. No. 2	23 26
Lake Superior Charcoal	27 04
Malleable	18 50

FIRST QUALITY BRIGHT TIN PLATES

IC 20x28 112 sheets	\$25 10
IX 20x28	29 60
IXX 20x28 56 sheets	16 20
IXXX 20x28	17 65
IXXXX 20x28	18 95

TERNE PLATES

	Per Box
IC 20x28, 40-lb. 112 sheets	\$26 00
IX 20x28, 40-lb. 112 sheets	28 50
IC 20x28, 25-lb. 112 sheets	21 75
IX 20x28, 25-lb. 112 sheets	24 25
IC 20x28, 20-lb. 112 sheets	20 00
IX 20x28, 20-lb. 112 sheets	22 50
IC 20x28, 15-lb. 112 sheets	18 50

"ARMCO" INGOT IRON PLATES

No. 8 ga. up to and including	
1/2 in.—100 lbs.	\$4 55

COKE PLATES

Cokes, 80 lbs., base, 20x28	\$13 60
Cokes, 90 lbs., base, 20x28	13 80
Cokes, 100 lbs., base, 20x28	14 00
Cokes, 107 lbs., base, IC	
20x28	14 30
Cokes, 135 lbs., base IX	
20x28	16 40
Cokes, 155 lbs., base, 56 sheets	9 20
Cokes, 175 lbs., base, 56 sheets	10 05
Cokes, 195 lbs., base, 56 sheets	10 90

BLUE ANNEALED SHEETS

Base 10 ga.	per 100 lbs. \$2 50
"Armco" 10 ga.	per 100 lbs. 4 00

ONE PASS COLD ROLLED BLACK

No. 18-20	per 100 lbs. \$3 75
No. 22	per 100 lbs. 3 90
No. 24	per 100 lbs. 3 95
No. 26	per 100 lbs. 4 05
No. 27	per 100 lbs. 4 10
No. 28	per 100 lbs. 4 20
No. 29	per 100 lbs. 4 25
No. 30	per 100 lbs. 4 45

"ARMCO" GALVANIZED

"Armco" 24	per 100 lbs. \$5 15
------------	---------------------

GALVANIZED

No. 18	per 100 lbs. \$4 20
No. 19	per 100 lbs. 4 45
No. 20	per 100 lbs. 4 60
No. 22	per 100 lbs. 4 65
No. 24	per 100 lbs. 4 80
No. 26	per 100 lbs. 5 05
No. 27	per 100 lbs. 5 15
No. 28	per 100 lbs. 5 20
No. 30	per 100 lbs. 5 70

BAR SOLDER

Warranted	
50-50	per 100 lbs. \$36 25

Commercial	
45-55	per 100 lbs. 33 25
Plumbers	per 100 lbs. 30 25

ZINC

In Slabs	\$ 8 50
----------	---------

SHEET ZINC

Cash Lots (600 lbs.)	\$12 00
Sheet Lots	13 00

BRASS

Sheets, Chicago base	17 1/2 c
Mill Base	18 c
Tubing, brazed base	26 1/2 c
Wire, base	18 1/2 c
Rods, base	15 1/2 c

COPPER

Sheets, Chicago base	22 c
Mill Base	21 c
Tubing, seamless base	25 c
Wire, No. 9, B & S Ga.	18 1/2 c
Wire, No. 10, B & S Ga.	18 1/2 c
Wire, No. 11, B & S Ga.	19 c
Wire, No. 8, B & S Ga. and heavier	17 1/2 c

LEAD

American Pig	\$7 00
Bar	8 00

TIN

Pig Tin	per 100 lbs. \$67 00
Bar Tin	per 100 lbs. 68 00

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

ASBESTOS

Paper up to 1/16	6c per lb.
Roll board	6 1/4 c per lb.
Mill board 3/32 to 1/4	6c per lb.
Corrugated Paper (250 sq. ft. to roll)	\$6 00 per roll

BRUSHES

Hot Air Pipe Cleaning	
Bristle, with handle, each	\$0 85
Flue Cleaning	
Steel only, each	1 25

BURRS

Copper Burrs only	40-5%
-------------------	-------

CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 40
American Seal, 10-lb. cans, net	50
American Seal, 25-lb. cans, net	2 07
Pecora	per 100 lbs. 7 51

CHIMNEY TOPS

Adams' Revolving	Wt. Doz.	Prize Doz.
4 in.	21 lbs.	\$11 00
6 in.	24 lbs.	11 50
7 in.	30 lbs.	13 50
8 in.	33 lbs.	15 00
9 in.	51 lbs.	16 50
10 in.	56 lbs.	18 00
12 in.	65 lbs.	22 00
14 in.	110 lbs.	35 00

CLINKER TONGS

Front Rank, each	\$0 75
Per doz.	8 40

CLIPS

Damper	
Adams No-Rivet Steel, with tail pieces, per gross	\$9 00
Tail pieces, per gross	2 50

COPPERS—Soldering

Pointed Roofing	
3 lb. and heavier	per lb. 40c
2 1/2 lb.	per lb. 45c
2 lb.	per lb. 48c
1 1/2 lb.	per lb. 55c
1 lb.	per lb. 60c

CORNICE BRAKES

Chicago Steel Bending	
Nos. 1 to 6B	Net

CUT-OFFS

Gal., plain, round or cor. rd.	
26 gauge	per 100 lbs. 30%
28 gauge	35%

DAMPERS

"Yankee" Hot Air	
7 inch, each 20c, doz.	\$1 75
8 inch, each 25c, doz.	2 40
9 inch, each 30c, doz.	2 75
10 inch, each 35c, doz.	3 00

Smoke Pipe	
7 inch, each	\$0 35
8 inch, each	40
9 inch, each	50
10 inch, each	60
12 inch, each	90

ADAMS No. 1 CHECK	
Check and Collar Complete	
8 inch, each	\$2 00
9 inch, each	2 25

End Check Only	
8 inch, each	1 60
9 inch, each	1 85

Collar Only	
8 inch, each	50
9 inch, each	65

No. 2 CHECK	
8 inch, each	1 00
9 inch, each	1 00

10% Disc. on Adams No. 1 and No. 2 Check	
Diamond Smoke Pipe	
7 inch, doz.	\$ 2 00
8 inch, doz.	3 20
9 inch, doz.	4 80
10 inch, doz.	6 00

Adams' Sheet Metal

7 inch, doz.	\$ 1 60
8 inch, doz.	2 20
9 inch, doz.	2 60
10 inch, doz.	2 80
12 inch, doz.	3 50
14 inch, doz.	5 00

DIGGERS

Post Hole	
Iwan's Split Handle (Eureka)	
4-ft. Handle	per doz. \$14 00
7-ft. Handle	per doz. 36 00
Iwan's Hercules pattern, per doz.	14 90

EAVES TROUGH

Galv. Crimpedge, crated 75 & 5%	
Zinc, "Barnes"	60%

ELBOWS

Conductor Pipe	
Galv., plain or corrugated, round flat Crimp.	
28 Gauge	60%
26 Gauge	45%
24 Gauge	15%

Galv. & Terne Steel	
Plain Rd. and Rd. Corr.:	
28 Ga.	60%
26 Ga.	45%
24 Ga.	15%

Square Corrugated	
No. 28 Gauge	50%
26 Gauge	35%

Portico Elbows	
Standard Gauge Conductor Pipe, plain or corrugated.	
Not nested	70 & 5%
Nested solid	70 & 5%

Sq. Corr., A. & B. & Octagon:	
28 Ga.	50%
26 Ga.	35%

Portico	
1", 1 1/4", 1 1/2"	45%

Copper	
16 oz., all designs	45%

Zinc—	
All styles	60%

ELBOWS—Stove Pipe	
1-piece Corrugated, Uniform Blue	
"Milcor" No. 28 Gauge, Doz.	\$1 25
5-inch	1 25
6-inch	1 35
7-inch	1 75

Special Corrugated	
6-inch	\$1 00
7-inch	1 60

Adjustable—Uniform Blue	
"Milcor" No. 28 Gauge, Uniform Blue, Doz.	\$1 75
6-inch	1 85
7-inch	2 15

WOOD FACES—50% off list.	
726-6-12 1/4" (100 rods)	\$28 68
1948-6-14 1/4" (100 rods)	43 62

FILES AND RASPS	
Heller's (American)	50-10%
American	60-10%
Arcade	50%
Black Diamond	50%
Eagle	50%
Great Western	50%
Kearney & Foot	50%
McClellan	50%
Nicholson	50%
Simonds	60%

FIRE POTS	
Clayton & Lambert's	
East of west boundary line of Province of Manitoba, Canada, No. Dakota, So. Dakota, Nebraska, Kansas, Oklahoma, Amarillo, San Angelo and Laredo, Texas	52%
West of above boundary	48%

Geo. W. Diener Mfg. Co. Ea.

No. 02 Gasolene Torch, 1 qt.	\$ 5 55
No. 0250, Kerosene, or Gasolene Torch, 1 qt.	7 50
No. 10 Tinner's Furn.	
Square tank, 1 gal.	12 60
No. 15 Tinner's Furn.	
Round tank, 1 gal.	12 00
No. 21 Gas Soldering Furn.	
Round tank, 1 gal.	3 60
No. 110 Automatic Gas Soldering Furnace	10 50

Double Blast Mfg. Co.	
Gasolene, Nos. 25 and 36	60%

Quick Meal Stove Co.	
Vesuvius, F. O. B. St. Louis	30%

(Extra Disc. for large quantities)	
------------------------------------	--

GALVANIZED WARE	
Falls (Galv. after made), 10-qt.	\$2 12

Tubs (Galv. after made), No. 1	8 00
No. 2	8 35

GLASS	
Single Strength, A, 25-in. brackets	87%
Single Strength, A, 34 to 40-in. bracket	84%
Single Strength, A, all other brackets	89%
Double Strength, A, all sizes	86%

HANGERS	
Conductor Pipe	
Milcor Perfection Wire	25%

Eaves Trough	
Milcor Triplex Wire	10%
Milcor Steel (galv. after forming) List	plus 12 1/2%
Milcor Selflock E. T. Wire, List	plus 50%

HOOKS	
Box	
V. & B. No. 1, each	\$0 20

Conductor	
"Direct Drive" Wrought Iron for wood or brick	15%

Hay	
V. & B. No. 1, each	\$0 26

HUMIDIFIERS	
"Front-Rank," Automatic	
In single lots	50c
In lots of 10 or more	50-54%
In lots of 25 or more	50-10c
Vaper pans, etc., each	50%

LIFTERS	
Stove Cover	
Coppered	per gro. \$8 00
Alaska	per gro. 4 75

MALLETS	
Tinners	
Hickory	per doz. \$3 25

MITRES	
Galvanized steel mitres, 28 Ga.	70
26 Ga.	60-20

NAILS	
Cut Steel	\$4 25
Cut Iron	4 35

WIRE	
Common	2 95
Cement Coated	3 95

(Continued on Page 178)	
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"Folks know what Sheet Steel is now"

"STANDIN' here at the bench makin' this elbow has just reminded me how little makin' of standard fittin's I do now'days. I used to make 'em all and never figured the cost. Now I buy 'em, mostly. I can't afford to put in time at the bench makin' the things I can buy at the market price and sell into a job at a profit. I made up my mind quite a while back that I'd follow this growin' use of Sheet Steel and I decided I'd go after business strong and cut my bench work down to just what we have to make for special requirements. So I get all the fittin's I can, ready made. It's worked out even better'n I thought. People are askin' for Sheet Steel more these days. They want to know if certain things can be made of it. They know what Sheet Steel is now. It's advertised and people are beginnin' to see the

possibilities in it. I can go out most any time in the neighborhood and bring back an order for somethin' to be made of Sheet Steel. That's why I say it's unusual for me to be makin' this elbow. I usually put in my time at the bench on the parts I can't buy in the market."



This trade-mark stenciled on galvanized Sheet Steel is definite insurance to the buyer that every sheet so branded is of prime quality—full weight for the gauge stamped on the sheet—never less than 28 gauge—and that the galvanizing is of the full weight and quality established by the SHEET STEEL TRADE EXTENSION COMMITTEE specification.

The wide adaptability of Sheet Steel for the making of an almost limitless number of things is an urge for sheet metal contractors to increase their selling efforts and confine bench work to only those parts of each job that can not be bought in the market, thus making room for the increased volume.

For full particulars, write the SHEET STEEL TRADE EXTENSION COMMITTEE, Oliver Building, Pittsburgh, Penna.

SHEET STEEL

for Strength Safety Beauty and Economy

When writing mention AMERICAN ARTISAN—Thank you!

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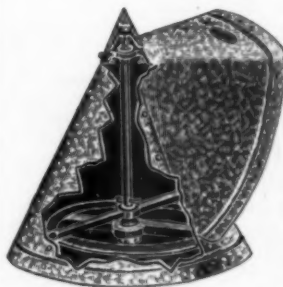
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NETTING, POULTRY		ROOFING	
Galvanized before weav-	ing	Best grade, slate surf. pre-	pared
Galvanized after weaving.	52 1/2-5%	Best talc surfaced.....	2 85
		Medium talc surfaced.....	2 00
		Light talc surfaced.....	1 20
		Red Resin Sheeting, per ton	57 00
PASTE		SCREWS	
Asbestos Dry Paste:		Sheet Metal	
200-lb. barrel	\$16 00	7, 1/2x1/4, per gross.....	\$0 52
100-lb. barrel	8 75	No. 10, 3/8x1/16, per gross.	68
35-lb. pail	3 50	No. 14, 1/2x1/4, per gross...	89
10-lb. bag	1 10		
5-lb. bag	60		
2 1/2-lb. cartons.....	35		
PIPE		SHEARS, TINNERS' & MACHINISTS'	
Conductor		Viking	\$22 00
Cor. Rd., Plain Rd. or Sq.		Lennox Throatless	
Galvanized		No. 18	35%
Crated and nested (all	gauges)	Shear blades	10%
Crated and not nested	(all gauges)	(f. o. b. Marshalltown, Iowa.)	
	75-2 1/2%		
	70-15%		
FURNACE PIPE		SHIELDS, REGISTER	
Double Wall Pipe and		No. 1 "Gem" floor....	\$12 00 doz.
Fittings	40-10%	No. 2 "Gem" wall.....	6 00 doz.
Single Wall Pipe, Round			
Galvanized Pipe	40-10%		
Galvanized and Tin Fit-	tings		
	40-10%		
Lead		SHOES	
Per 100 lbs.....	\$12 50	Galv. 28 Gauge, Plain or cor-	rugated round flat crimp...60%
		28 gauge round flat crimp....	45%
		24 gauge round flat crimp....	15%
Stove Pipe			
"Milcor" "Titelock" Uniform Blue			
Stove			
28 gauge, 5 inch U. C.	11 50		
28 gauge, 6 inch U. C.	12 25		
28 gauge, 7 inch U. C.	14 25		
30 gauge, 5 inch U. C.	10 50		
30 gauge, 6 inch U. C.	11 25		
30 gauge, 7 inch U. C.	13 25		
T-Joint Made up			
6-inch, 28 ga....per doz.	\$ 5 00		
All Zinc			
No. 11, all styles.....	60%		
POKERS, STOVE			
W'r't Steel, str't or bent,	per doz. \$0 75		
Nickel Plated, coil handles,	per doz. 1 10		
POKERS, FURNACE			
Each	\$0 50		
PULLEYS			
Furnace Tackle....per doz.	\$0 60		
Furnace Screw (enameled)	per gro. 6 00		
.....per doz.	75		
Ventilating Register			
Per gross.....	9 00		
Small, per pair.....	30		
Large, per pair.....	50		
PUTTY			
Commercial Putty, 100-lb			
Kits	\$8 40		
QUADRANTS			
Malleable Iron Damper.....	10%		
REDUCERS—Oval Stove Pipe			
Per Doz.			
7-6, 1 doz. in carton.....	\$2.25		
REGISTERS AND BORDERS—			
Baseboard, Floor and Wall.			
Cast Iron	20%		
Steel and Semi-Steel.....	40%		
Baseboard	40%		
Wall	40%		
Adjustable Ceiling Ventilators.	40%		
Register Faces—Cast and Steel			
Japanned, Bronzed and			
Plated, 4x6 to 14x14.....	40%		
Large Register Faces—Cast,			
14x14 to 38x42.....	60%		
Large Register Faces—Steel,			
14x14 to 38x42.....	65%		
RIDGE ROLL			
Galv., Plain Ridge Roll,			
b'did	75-10-5%		
Galv., Plain Ridge Roll			
crated	75-10%		
Globe Finials for Ridge			
Roll	50%		
WIRE			
Plain annealed wire, No. 8,			
per 100 lbs.....	\$3 05		
Galvanized barb wire, per			
100 lbs.	3 90		
Wire Cloth—black painted,			
12-mesh, per 100 sq. ft....	1 65		
Cattle Wire—galvanis'd catch			
weight spool, per 100 lbs.	3 65		
Galvanized Hog Wire, 80 rod			
spool, per spool.....	3 13		
Galvanized Plain Wire, No.			
9, per 100 lbs.....	3 40		
Stove Pipe, per stone.....	1 10		
WRINGERS			
No. 790, Guarantee	each \$5 10		
No. 770, Bicycle	each 4 70		
No. 670, Domestic	each 4 35		
No. 110, Brighton	each 3 70		
No. 750, Guarantee	each 5 10		
No. 740, Bicycle	each 4 70		
No. 22, Pioneer	each 3 40		
No. 2, Superb	each 2 65		

The NEW IMPROVED "STANDARD" Rotable Ventilator



Patents pending

This favorite cone-shaped ventilator is now improved in several important points.

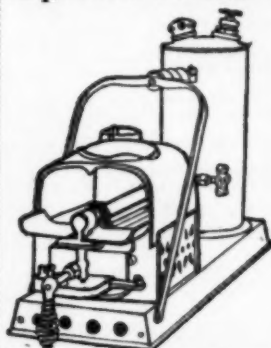
The weight of the ventilator body is now carried on a concave thrust bearing nested in the apex of the conical body. This bearing turns upon the pivot point of the stationary center spindle.

The bronze Guide Bushings are now made of non-corrosive bronze which minimizes friction and any tendency to screech when body is rotating.

There are other new features. Write today for new catalog and price list.

STANDARD VENTILATOR CO., LEWISBURG, PA.

Improved Models of Soldering Furnaces



Have you seen the improved models? The greatest line of Soldering Furnaces today on the market. They should be. There is more experience behind them. Forty-eight years of it! The Gems were popular before the majority of present day furnaces were heard of. It is the oldest, the recognized standard Soldering Furnace today.

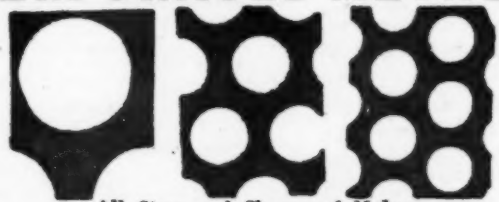
Look these models over. Each leads its class. Line them up and take your choice.

Do you want a Catalog?

BURGESS SOLDERING
FURNACE CO.

Improved No. 3 Gem with Pump Department A COLUMBUS, O.

PERFORATED METALS



All Sizes and Shapes of Holes
In Steel, Zinc, Brass, Copper, Tinplate, etc.
For All Screening, Ventilating and Draining
EVERYTHING IN PERFORATING METAL

THE HARRINGTON & KING PERFORATING CO.

5649 FILLMORE ST.-CHICAGO, ILL. U. S. A.
NEW YORK OFFICE: 114 LIBERTY ST.

-B.B.- LINE OF SHEET METAL SUPPLIES

B.B. CONDUCTOR HOOKS AND GUTTER HANGERS
"SHUR-LOCK" CONDUCTOR PIPE
OCTAGON AND POLYGON CONDUCTOR PIPE
"E-Z FIT" EAVES TROUGH
"QUAKER CITY" MITRES, ENDS, CAPS AND
OUTLETS
EAVE TROUGH STRAP AND ROD HANGERS
ORNAMENTAL CONDUCTOR STRAPS AND ENDS

YOUR JOBBER CARRIES THEM IN
STOCK FOR PROMPT SHIPMENT

Manufactured by

BERGER BROS. CO.

229 to 237 ARCH STREET

PHILADELPHIA



NOW IS THE TIME TO BUY
YOUR SPRING REQUIREMENTS

—Write for Prices—

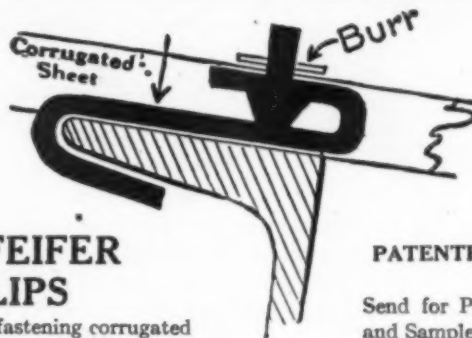
THE J. M. & L. A.
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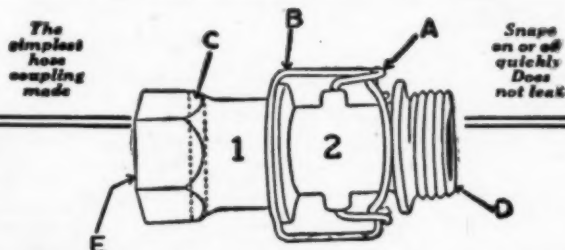
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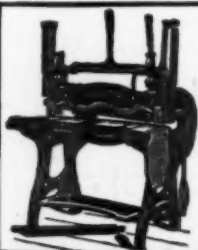
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Sturtevant Co., B. F., Boston, Mass.
- Windows—Steel.**
Lupton's Sons Co., David, Philadelphia, Pa.
- Wire—Electrical.**
American Steel & Wire Co., Chicago, Ill.
- Wire Hoops.**
American Steel & Wire Co., Chicago, Ill.
- Wire Rope.**
American Steel & Wire Co., Chicago, Ill.
- Winc.**
Merchant & Evans Co., Philadelphia, Pa.
New Jersey Zinc Co., The, New York, N. Y.

WANTS AND SALES

Any yearly subscriber to AMERICAN ARTISAN may insert advertisements of not more than fifty words in our Want and Sales Columns WITHOUT CHARGE.

Such advertisements, however, must be limited to help or situation wanted, tools or equipment for sale, to exchange or to buy, business for sale or location desired.

BUSINESS CHANCES

Lightning Rods—Dealers who are selling Lightning Protection will make money by writing us for our latest Factory to Dealer Prices. We employ no salesmen and save you all overhead charges. Our Pure Copper Cable and Fittings are endorsed by the National Board of Fire Underwriters and hundreds of dealers. Write today for samples and prices. L. K. Diddle Company, Marshfield, Wis.

For Sale—Warm air furnace business established 15 years, prosperous and successful, at Boise, Idaho. Property includes 5-room modern cottage, two-story shop at rear of lot large enough to store 1½ carloads of furnaces and fittings. Machine equipment includes eleven items, such as brake, folders, seaming machines, etc., truck, trailer and garage. Owner must sell and move on account of wife's health. This will require an investment of \$6,000 but is a golden opportunity, as business is well established and has a long list of satisfied customers of Lennox Furnace Company's Torrid Zone guaranteed line of steel warm air furnaces. Torrid Zone agency goes with business if buyer satisfies Lennox Furnace Company as to his experience, capital and ability. Address W. C. Quigley, 1401 N. 12th St., Boise, Idaho. J457

Here is a wonderful opportunity for a tinner to step into a going shop fully equipped with tools, 1 ton truck and Dodge car. Equipment lists at \$3,000. Will sell for \$2,500 and turn over \$1,600 worth of work at a good profit. Will stay with new owner until this work is completed if necessary. This shop is located in Evanston, Illinois. Address D-457, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

For Sale—1,000 pound hand elevator complete. Everything in fine condition. For a two story building. Not been used very much. Building is rented to a business where they do not need the elevator but the space. Make me an offer in cash or trade. Would like to buy large burring machine and 30 inch roller. Fred Salzwedel, Columbus, Wisconsin. B-457

For Sale—Well established and fully equipped sheet metal heating and roofing business. Ash Block shop with sewer, water, light and natural gas. Well built 6 room house with bath and slate roof. In city of 45,000 population. Bargain for quick sale. W. R. Allen, 216 Maple Avenue, Warren, Ohio. C-457

For Sale—Plumbing and sheet metal shop in good Kansas town. Plenty of work. Good stock and tools. Have reasons for selling. Address Z-456, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Wanted—A good live partner with some money to invest in a good sheet metal shop; one who can sell and take care of business end. Address X-456, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

SITUATION WANTED

Situation Wanted—I have sold my shop and want to connect with some live company in a first-class shop doing heating, warm air, steam and hot water. I am a first-class heating man and nothing but a steady year-around job will do. Minnesota town of 4,000 or more preferred. State salary and commission. Address L-457, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.

Situation Wanted—Have sold my interest in a sheet metal shop and desire a position in a good shop connected with a hardware store at a reasonable salary or percentage basis. Long experience and practical warm air furnace estimator and Standard Code installer. H. J. Ester, 7215 West Main Street, Washington, Missouri. E-457

Would like to get in touch with a manufacturer of furnaces and stoves to handle their line in Gary, Ind., as a factory representative in Lake County. Large acquaintance and experienced. Want to sell from factory to customer. This must be a good furnace and a good name. Address B-458, AMERICAN ARTISAN, 620 S. Michigan, Chicago, Ill.

Situation Wanted—A high grade experienced furnace salesman will consider a change for the coming year. Capable of planning and estimating heating systems according to the "Standard Code"—also fan work. Address C-458, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.

First-class tinner and furnace man, also pattern cutter, desires steady employment with reliable firm. 18 years' experience. Married. Available at once and A1 references. Please state wages and full particulars. Address J. D. Grace, Elmer, Mo. M457

HELP WANTED

National manufacturers of sheet metal and sheet metal household wares require the services of a salesman in the city of Chicago. One experienced in this line or kindred lines preferred, but not absolutely necessary. Reply in your own handwriting, stating age, experience and salary wanted, to W-457, AMERICAN ARTISAN, 620 S. Michigan Ave., Chicago, Ill.

Wanted—A furnace salesman to take up territory left by one salesman for seven years. Leaving on account of health. Steady year around. I prefer elderly man and married with family. Address A-457, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Wanted—Furnace salesmen to represent manufacturer in middle west. Must be capable of planning and estimating heating systems according to the Standard Code and working territory close. Address H-457, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Wanted—Furnace salesmen not over 35 to sell dealers and help sell individual customers in the state of Iowa. Good opportunity for men that can qualify. Address G-457, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Wanted—A first-class gutter, roofing and furnace man; open shop; reasonably steady work if you can come at once. Apply to Stutz Brothers, 1701 McCallie Ave., Chattanooga, Tenn. Z457

Wanted—First-class sheet metal worker and furnace man. Address Andrew Lind, Dundee, Ill. Y457

Wanted—First-class sheet metal worker. Good layout man on all kinds of ventilating, blowpiping, boiler breechings, cornices, skylights, etc. Good steady job for the right man. Address S-457, AMERICAN ARTISAN, 620 S. Michigan, Chicago.

HELP WANTED

Wanted—Plumber and fitter. Do not reply unless you want steady job. Must be sober all the time. Chas. Soames, 15 West 5th Street, Peru, Ind. Y-456

TINNERS' TOOLS

For Sale or Trade—1 set 36-inch forming rolls, 1 30-inch Wright's folder, 1 30-inch mandrel stake. I want wiring machine, burring machine and hatchet stake. Address Mepharm Sheet Metal Works, 1601 Ventura Ave., Ventura, Calif. X457

For Sale—Set of tinner's tools except brake. All in A-1 condition. Price only \$150.00. B. F. Jones, 112 Grant Street, S. W., Massillon, Ohio. W-456

Wanted to Buy—Good used cornice brake. Must be reasonable. Address W. S. Sturdivant, 1511 S. Osage Ave., Sedalia, Mo. T457

MISCELLANEOUS

Anyone knowing the whereabouts of Jim Lee Modrell, plumber, kindly notify O. Fisher, 104 Wood Ave., Salida, Colorado. O457

BOOKS

The Ventilation Handbook, by Charles L. Hubbard. A practical book designed to cover the principles and practice of ventilation as applied to furnace heating, ducts, flues and dampers for gravity heating; fans and fan works for ventilation and hot blast heating by means of a comprehensive series of questions, answers and very plain descriptions easy to understand. Price \$2.00. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.



Are You looking for more sales?

WARM Air Furnace and Furnace Supply Manufacturers who are desirous of securing high grade sales managers and worth while traveling men will find that a Special Notice advertisement in these columns will produce results.

AMERICAN ARTISAN

has put many a good man in touch with progressive manufacturers.

This is the best personnel market page in the field—use it.

BOOKS

Sheet Metal Duct Construction, by Neubecker—A treatise on the construction and erection of heating and ventilating ducts, including the cutting and forming of the metal, the laying out of the elbows, etc. A practical expert wrote this book and you'll find that it covers the subject thoroughly. By William Neubecker. Bound in cloth, 194 pages, 217 illustrations. Size 5½x8¼ inches. Price \$2.00. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Manual of Automotive Radiator Construction and Repair, by F. L. Curfman and T. H. Leet—Anyone interested in Radiator Repairing will find the 185 pages of practical instructions and the 120 illustrations showing actual construction and repairing a big help. In a condensed manner some four to five thousand answers to questions are given. It is thoroughly practical as both authors are men of wide experience in this work. Printed in large, easy to read type. Measures 5¼x9 inches. Price \$2.50. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Kinks and Labor Saving Methods for Sheet Metal Workers, Vols. 1 and 2—Volume 1. There are hundreds of ideas and expedients, all contributed by sheet metal workers throughout the country, illustrated by cuts and original drawings. Cloth bound. Size 4½x7 inches. Price \$1.00. Volume II written in same popular style as Volume I. Places at your disposal a comprehensive collection of ingenious ways of executing many practical tasks in much more simple way than if done in the regulation manner. Also contains special articles on Automobile Repairing; gives a very practical series of illustrated directions on erecting metal ceilings with ten guide rules which will save time, trouble and expensive mistakes. Price \$1.00. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue Chicago, Illinois.

SPECIAL NOTICES

The Rate for Special Notices
— displayed want ads —
\$3.00 per inch per insertion.

PATENTS

HUBERT E. PECK
Patent Attorney
Barrister Bldg., WASHINGTON, D. C.

The Patent Rights D. R. G. M. No. 992,563, "Dika" coffee-tea strainers, also funnel-sieves are to be sold for U. S. A. Already successfully introduced in Germany. Details from Adam Dingeldein, Bismarkstrasse 56, Offenbach on Main, Germany Q457.

WANTED

To purchase a live line of furnace patterns—Good Will—etc.; patterns that have been in existence for the last 10 years or more. State condition of Patterns, price, terms, etc., in first letter and amount sold. Address A-458, American Artisan, 620 South Michigan Avenue, Chicago, Illinois.

SPECIAL NOTICES

FOREMAN WANTED

Department foreman for a tin and galvanized furnace fittings factory. Should be a pattern draftsman, accurate and know how to make and instruct help efficiently to produce fittings in quantities at minimum cost. State your qualifications, age, married or single, experience in furnace fittings and where, when available. Factory located in middle west. Address F-457, AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

SALES MANAGER WANTED

Excellent opportunity open December 1st for an experienced furnace salesman as Sales Manager for an established manufacturer. Previous experience as Sales Manager not required but long and exceptional experience as furnace salesman is necessary to qualify for this position. Technical knowledge of furnace construction also required.

The man who can satisfy us may acquire an interest in the business but this is not necessary as what we want is a high type of business producer; a man who can prove to us that he has been a star salesman in the past and is an entirely dependable kind of a business man.

Address Sales Manager, P457, American Artisan, 620 S. Michigan, Chicago.

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FOR MANY YEARS**
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SUPPLY your next job with "I.S.V." and you never will have a complaint. Complete stock on hand for prompt shipment.

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AKKRAT VENTILATORS, INC.
1191 Builders Bldg. CHICAGO

SPECIAL NOTICES

FIVE FURNACE SALESMEN

Wanted by established manufacturer of quality Furnaces. The product and also the proposition will bear the closest scrutiny. Territories are both new and old, located in Middle West. Men with a successful selling record, either wholesale or retail, are wanted.

If you are looking for a real opportunity, a place where hard work and honesty will repay you in direct proportion to your efforts, and a permanent situation, write for complete details to R457, American Artisan, 620 South Michigan Boulevard, Chicago.

Manufacturers of Warm Air Heaters

HERE'S the salesman you're looking for.

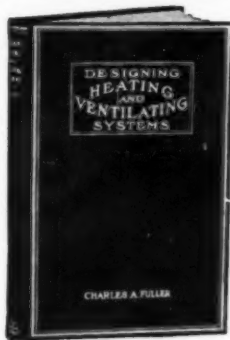
He can help you in that sales drive that you are putting on—he gets results—he knows the game—he knows the trade and he is well known and respected by thousands of live, high class warm air heater installers throughout the country and especially in the middle west and west.

He has called on the trade and sold warm air heaters for many years—yet he's an up-to-date salesman who works every week of the year—rain or shine.

This salesman's name is
AMERICAN ARTISAN
and you can secure his services at once.

Write today and get complete details concerning his ability to work for you and with your regular salesmen.

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89 Figures—
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Designing Heating and Ventilating Systems

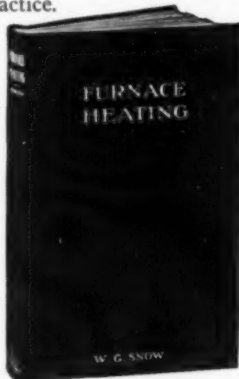
By
Charles A. Fuller
Consulting Engineer

THIS new edition, treats the practical application of engineering rules and formulas in every day use, in laying out steam, hot water, furnace and ventilating equipment for buildings of all kinds, presented in a simple manner.

This book explains the heat unit, foot pound and similar measures in such a way that the less technical mind can readily understand and apply them.

It also explains in detail exactly the same methods that the leading engineers use in determining the sizes and proportions of equipment in every day work. The quickest and easiest methods of determining the proper amount of radiator surface for a room or building of any size are described.

Plumbing and Heating Contractors will find it an invaluable reference book. Every phase of Heating and Ventilating treated is developed along the lines of the most recent practice.



258 Pages,
6x9 ins.

77 Figures—
Cloth, \$3.00

Furnace Heating

By
William G. Snow

Member: American Society of Mechanical Engineers; American Society of Heating and Ventilating Engineers

THIS practical book deals with the different types of furnaces, their design, construction and proper installation, including warm air, combination heating systems, also covering the main features of the one pipe or pipeless furnace.

The author explains in simple English practical information on heating and ventilation of school and public buildings, churches, stores, etc. He also covers the setting up of furnaces, and describes all types of furnace fittings.

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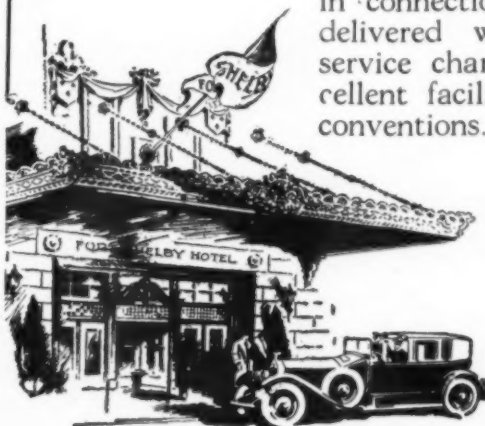
The only "spark-proof" and fully enclosed incinerator in the market. Sells at a popular price. Why not add \$6.00 to \$12.00 daily to your income with very little effort? Don't overlook this opportunity—write today!

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WHETHER your choice be one of the many very comfortable rooms at \$2.50, \$3 or \$4 or one of the richly furnished suites in the 22-story recent addition, whose sunny bay windows give an entrancing view of city, river and Canadian shore, you will enjoy a special sense of value in Hotel Fort Shelby.

All rooms have Servidors. Convenient to all downtown; principal shops almost at the door. Garage in connection; cars delivered without service charge. Excellent facilities for conventions.



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We take our hats off to G. S. Grochowski, proprietor of the Progress Roofing Co., Chicago, for one of the finest jobs ever accomplished with Milcor Copper Spanish Tile. The un-retouched pictures shown above tell the story.



Credit is due also to Mrs. Grochowski, who "discovered" Milcor Spanish Tile in the Milcor Architectural Sheet Metal Guide. She recognized the beauty of this type of roof and knew that pure copper never wears out.

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